California State Department of
Public Health

Chronic Disease Program for California

ARMY MEDICAL LIBRARY

FOUNDED 1836

WASHINGTON, D.C.

A CHRONIC DISEASE PROGRAM FOR CALIFORNIA

Report of the California Chronic Disease Investigation

Prepared in accordance with the provisions of Assembly Concurrent Resolution No. 42 (1947)

and

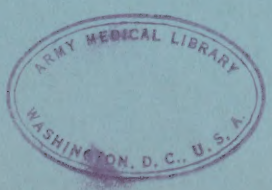
Printed in accordance with the provisions of House Resolution No. 58 (1949)

By

ASSEMBLYMAN JOHN F. THOMPSON
Chairman, Assembly Committee on Public Health

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH
WILTON L. HALVERSON, M.D., Director of Public Health

January, 1949



A CHRONIC DISEASE PROGRAM FOR CALIFORNIA

Report of the California Chronic Disease Investigation

Prepared in accordance with the provisions of Assembly Concurrent Resolution No. 42 (1947)

and

Printed in accordance with the provisions of House Resolution No. 58 (1949)

By

ASSEMBLYMAN JOHN F. THOMPSON
Chairman, Assembly Committee
on Public Health

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH
WILTON L. HALVERSON, M.D., Director of Public Health

January, 1949

LETTER OF TRANSMITTAL

State of California, Department of Public Health
760 Market Street, San Francisco 2, California
January 10, 1949

Honorable Earl Warren, Governor
Honorable Goodwin J. Knight, President of the Senate
Honorable Sam L. Collins, Speaker of the Assembly
State Capitol, Sacramento 14, California

DEAR SIRS: By the provisions of Assembly Concurrent Resolution No. 42 (1947) the Department of Public Health was directed to investigate the problems involved in the reduction of deaths and disability from cancer and other chronic diseases; to report to the 1949 General Session of the Legislature the results of its investigation; and to make recommendations as to a program for the reduction of such deaths and disability.

The department—recognizing that the chronic disease problem involves many and varied interests—called upon leading professional and lay persons in the State for guidance, advice, and assistance. An advisory committee and technical advisory groups played major roles in the chronic disease investigation.

As director of the State Department of Public Health, I respectfully submit the report of the chronic disease investigation. In so doing, I take great pleasure in pointing out that this is not the report of the department alone—but rather the report of the department and the advisory committee working together as a team, ably assisted by the technical advisory groups.

Respectfully,

WILTON L. HALVERSON, M.D.
Director, Department of Public Health

ASSEMBLY CONCURRENT RESOLUTION No. 42

Adopted in Assembly April 14, 1947
Adopted in Senate June 6, 1947

WHEREAS, It is the desire of the Legislature to provide in every way possible for a program to reduce the deaths and disability from cancer and other chronic diseases in the State; and

WHEREAS, It is necessary in making such provision that the Legislature be fully informed on the problems relating to such a program; now, therefore, be it

Resolved by the Assembly of the State of California, the Senate thereof concurring, That the State Department of Public Health is hereby requested and directed to investigate the problems involved in the reduction of deaths and disability from cancer and other chronic diseases and that the State Department of Public Health report to the 1949 General Session of the Legislature the results of its investigation and make recommendations as to a program for the reduction of such deaths and disability and the costs thereof; and be it further

Resolved, That the Chief Clerk of the Assembly is directed to transmit copies of this resolution to the Governor of California and to the State Director of Public Health.

CHRONIC DISEASE ADVISORY COMMITTEE

Robert Ash, Secretary, Alameda County Central Labor Council, A. F. L., Oakland
Edwin L. Bruck, M.D., Chairman of the Council, California Medical Association, San Francisco
Rt. Rev. William J. Flanagan, General Director, Catholic Social Service, San Francisco
Joe Hart, Modesto
Kenneth W. Haworth, M.D., Health Officer, Napa County, Napa (Humboldt County, Eureka, when appointed)
Walter C. Kennedy, Second Vice President and Chief Underwriter, California-Western States Life Insurance Company, Sacramento
Howard Lambert, Community Services Director, C.I.O., Los Angeles
R. B. McClellan, Chairman of Health and Hospitals Committee, County Supervisors' Association, Lompoc
Lawrence B. O'Meara, D.O., California Osteopathic Association, Los Angeles
Edward S. Rogers, M.D., Dean of School of Public Health, University of California, Berkeley
Mrs. Russell Scott, Chairman of Health Committee, California Congress of Parents and Teachers, Salinas
William P. Shepard, M.D., Third Vice President, Metropolitan Life Insurance Company, San Francisco
Howard F. West, M.D., Medical Director, Los Angeles County Department of Charities, Los Angeles
G. Otis Whitecotton, M.D., Medical Director, Alameda County, and Trustee, Association of California Hospitals, Oakland
Charles Wollenberg, Director, State Department of Social Welfare, Sacramento

TECHNICAL ADVISORY GROUPS

Cancer Commission California Medical Association

Lyell C. Kinney, M.D., Chairman
San Diego
John W. Cline, M.D.——San Francisco
L. Henry Garland, M.D.—San Francisco
E. Eric Larson, M.D.——Los Angeles
Orville N. Meland, M.D.——Los Angeles
Harry E. Peters, M.D.——Oakland
Henry J. Ullman, M.D.—Santa Barbara
David A. Wood, M.D.——San Francisco
J. Homer Woolsey, M.D.——Woodland

Epilepsy Medical Advisory Board, Northern Section, California Society for Crippled Children

Robert B. Aird, M.D., Chairman
San Francisco
Crawford Bost, M.D.——San Francisco
Alvin H. Jacobs, M.D.——San Francisco
Henry Newman, M.D.——San Francisco
George H. Schade, M.D.—San Francisco

Northern California Rheumatism Association

James Rinehart, M.D., Chairman
San Francisco

Heart Advisory Committee California Tuberculosis and Health Association

S. J. McClendon, M.D., Chairman
San Diego
Howard Bosworth, M.D.——Los Angeles
Louis E. Martin, M.D.——Los Angeles
Charles A. Noble, Jr., M.D.
San Francisco
William Paul Thompson, M.D.
Los Angeles
Harold Rosenblum, M.D.—San Francisco
(Committee Consultant)

Bay Area Committee American Diabetes Association

I. Lyon Chaikoff, M.D.——Berkeley
Mary B. Olney, M.D.——San Francisco
Hobart Rogers, M.D.——Oakland
Francis Scott Smyth, M.D.
San Francisco
H. Clare Shepardson, M.D.
San Francisco

Bureau of Dental Health California Department of Public Health

Hugo Kulstad, D.D.S., Chief
San Francisco

CONTENTS

	Page
Letter of Transmittal	3
Assembly Concurrent Resolution No. 42	4
Chronic Disease Advisory Committee	5
Technical Advisory Groups	6
Introduction	9
Summary of Findings and Recommendations	11
A Chronic Disease Program for California	18
Magnitude of the Chronic Disease Problem in California	18
Necessary Services and Facilities for an Effective Chronic Disease Program	
Research	22
Preventive Services	23
Statistical Services	24
Professional and Vocational Training and Education	25
Health Education	26
Diagnostic and Therapeutic Services	27
Hospital Care Services	28
Other Institutional Care Services	30
Home Care Services	33
Future Chronic Disease Program	34
APPENDIX	
A. Demographic Studies	36
A-1 California's Population and Chronic Disease	38
A-2 Chronic Disease Mortality in California	45
A-3 Morbidity Data From the California Disability Insurance Program	61
A-4 Estimates of Chronic Illness in California	91
B. Services and Facilities for the Chronically Ill	95
B-1 Services and Facilities for Chronically Ill Welfare Clients	98
B-2 Hospitals and Related Facilities in California	103
B-3 Notes on Bedside Nursing Services in California	109
B-4 Vocational Rehabilitation Services in California	112
B-5 The Crippled Children's Program in California	121
C. Expert Opinion	126
C-1 County Welfare Directors	130
C-2 Administrators of County General Hospitals	136
C-3 Presidents of Hospital Conferences	141
C-4 Presidents of County Medical Societies	144
C-5 Local Health Officers	149
C-6 Presidents of Local Osteopathic Societies	154
C-7 Executives of Voluntary Welfare Agencies	158
D. Reports of Technical Advisory Groups	163
D-1 Cancer	165
D-2 Heart Disease	191
D-3 Diabetes	197
D-4 Epilepsy	201
D-5 Dental Disease	206
D-6 Rheumatism	208
E. Pertinent Investigations Conducted in California and Other States	210
E-1 Studies in California	211
E-2 Planning for the Chronically Ill in Other States	213
E-3 Planning at the Local Level in Other States	217

INTRODUCTION

ORGANIZATION OF THE INVESTIGATION

The chronic disease investigation was conducted by the California Department of Public Health with the advice and assistance of an advisory committee and technical advisory groups.

The advisory committee, appointed by the State Director of Public Health, provided guidance and assistance in all phases of the investigation—from initial planning through the final report.

Technical advisory groups for specific chronic diseases—cancer, heart disease, diabetes, epilepsy, and dental conditions—were requested to study the problems relating to these specific diseases and prepare reports incorporating their findings and recommendations. The reports—presented in Appendix D—prepared by these groups were used extensively in drafting the findings and recommendations. Although attempts were made to obtain similar reports on alcoholism and rheumatism, it was not possible to complete the work on these two subjects within the time allotted for the investigation.

The staff of the State Department of Public Health, working closely with the advisory committee and the technical advisory groups, collected and analyzed statistical and other data for the investigation and assisted in the development of the findings and recommendations of this report.

SCOPE AND METHODS OF THE INVESTIGATION

The advisory committee, at its first meeting, agreed that the investigation should: (1) Obtain data on the magnitude of the chronic disease problem in California, (2) obtain information on present services and facilities, (3) obtain information on necessary services and facilities to cope with the problem, and (4) develop, from these data and related materials, recommendations for a program to reduce deaths and disability from the chronic diseases.

The following methods—approved by the advisory committee—were used to obtain data and to provide information essential for chronic disease program planning:

(1) Analyses were made of pertinent investigations carried out in California and elsewhere;

(2) Statistical studies were made of chronic disease deaths in California, illness and disability from chronic disease in California, and the age distribution of California's population;

(3) Expert opinion was obtained from county welfare directors, administrators of county general hospitals, presidents of hospital conferences, presidents of county medical societies, local health officers, presidents of local osteopathic associations, and executives of voluntary welfare agencies;

(4) Studies were made of present services and facilities for the chronically ill; and

(5) Studies of specific chronic diseases were made by technical advisory groups composed of leading clinicians in the respective fields.

The advisory committee, utilizing the data and related material from these sources and aided especially by the detailed reports of the technical advisory groups, developed and approved the findings and recommendations of this report.

SUMMARY OF FINDINGS AND RECOMMENDATIONS

MAGNITUDE OF THE CHRONIC DISEASE PROBLEM

Chronic diseases * accounted for the deaths of 66,518 persons in California during 1947—more than two-thirds of the total number of persons who died in the State that year. Forty percent (26,108) of the chronic disease deaths occurred among persons under 65 years of age. Cardiovascular diseases and cancer were the leading causes of death.

The number of persons who die each year from the chronic diseases is only a fraction of the total number of persons who suffer from chronic illness. The best available data suggest that in 1947 California had approximately 104,000 persons disabled the entire year by chronic illness and approximately 351,000 disabled for periods ranging from one week to one year. Over two-thirds of these 455,000 persons were less than 65 years of age.

The estimated number of diagnosed cases of cancer during 1947 in California was 50,000; the number of diagnosed cardiovascular cases was several times as large. During the first year of operation (1947) the California disability insurance state plan, covering less than one-third of the State's population, paid disability benefits amounting to more than 7 million dollars for a total of 380,000 weeks of illness due to certain of the chronic diseases. This expenditure, partial compensation for wage loss, did not include the cost of medical care, hospitalization and allied services required for most extended periods of chronic disability.

The cases included in the above estimates are, of course, those which have been diagnosed. Accurate estimates cannot be made of the number of undiagnosed cases. There are indications, however, that without being aware of it as many as 100,000 Californians have heart disease and 70,000 have diabetes.

There are relatively few families not affected by a chronic disease at some time. There is hardly any area in the State that is unaware of the effects of these diseases on the welfare load and on the demands for medical, hospital, nursing and related services.

A significant proportion of disability from chronic diseases might be prevented with present medical knowledge. For example, it is estimated that 30 percent of the patients that now die of cancer could have been cured † had they received prompt and adequate treatment when the lesion first was discoverable.

---

* For specific diseases designated for study by the Chronic Disease Advisory Committee, see page 18.

† That is, these persons would have survived at least five years without evidence of the disease.

NECESSARY SERVICES AND FACILITIES FOR AN EFFECTIVE CHRONIC DISEASE PROGRAM

To meet the growing and already extensive chronic disease problem in California, the following services and facilities are necessary:

1. Research

Advances in combatting certain of the chronic diseases still depend on research. California has a number of professionally qualified medical and allied research institutions. However, grants from the Federal Government and other public and private sources have not been allocated to some of these institutions because of the lack of physical facilities necessary for carrying out research.

It is recommended that the specific needs of California research institutions for additional physical facilities essential to the conduct of expanded research programs on the chronic diseases be determined. Such determination should be made by the State Department of Public Health in cooperation with the research institutions and appropriate professional societies.

2. Preventive Services

A considerable amount of chronic illness and disability could now be prevented if effective use were made of existing knowledge and techniques. Early discovery of and prompt medical attention for many of the chronic diseases are basic factors in control. Screening methods for the detection of certain of these diseases (e.g. heart disease and diabetes) are being developed and some are now ready for wide-scale application. Accident prevention, industrial hygiene, professional and public education concerning the chronic diseases, and intensification of efforts against those communicable diseases which lead to chronic conditions—all play a significant role in preventing illness, disability and premature death. Although private and public agencies in California are carrying out some activities in the field of prevention, as yet only a beginning has been made.

It is recommended that the development and utilization of preventive services for the chronically ill be undertaken by local health agencies with the cooperation and approval of local professional societies. The preventive program should include professional and public education concerning the chronic diseases, mass-screening methods (where proven medically sound) for early detection of chronic diseases, intensification of communicable disease control programs with specific emphasis on those diseases leading to chronic conditions, and accident prevention activities.

3. Statistical Services

Continuing statistical studies of the causes of death and illness are essential for knowledge of the chronic disease problem in California. The State Department of Public Health receives death certificates; however, it has no specific authorization for continuing statistical studies of chronic disease. Data on illness and disability from chronic disease

are important, but difficult to collect. Not until recently has any effort been made to tap the sources of these data within the State: e.g. a few hospitals are furnishing information on cancer cases to the Tumor Registry of the State Department of Public Health, and the department is receiving disability statistics derived from the state disability insurance program. There is need for further development of sources and methods of obtaining current information on the incidence, prevalence and duration of cancer and the other chronic diseases in California.

It is recommended that the State Department of Public Health maintain statistical services on a continuing basis as part of a chronic disease program. Special attention should be directed to the development of methods and sources for obtaining current data on chronic illness, without universal, regular reporting of individual cases of all chronic diseases. The tumor registry should be expanded on a voluntary basis to include all hospitals and clinics, and where practicable, private physicians—with at least partial reimbursement for the expenses of reporting.

4. Professional and Vocational Training and Education

An effective chronic disease program depends in a large measure upon the knowledge of several professional groups including physicians, dentists, administrators of hospitals and other institutions, nurses and medical social workers. All these require continuing educational opportunities if they are to be expected to utilize current advances in their fields. Patterns of postgraduate education for physicians are being developed in the cancer and heart fields. Parallel programs should be made available to other professional groups, and comparable programs should be developed for other chronic diseases. It is particularly important to extend educational opportunities to personnel in the rural areas.

A shortage of personnel for nursing care requires that special attention be devoted to recruitment and adequate training of nurses and auxiliary workers.

It is recommended that the professional education and training programs of state and local professional societies be expanded; that cooperative planning be undertaken with the postgraduate training programs of the several professional schools and voluntary health agencies; and that the State Department of Public Health assist in the planning of programs of advanced professional education and training in the field of the chronic diseases. For financing such programs, state funds should be made available where there is a demonstrated need to augment contributions of professional societies for professional education. No claims should be made, by agencies of the State, on the services of individuals trained through the use of such funds.

It is further recommended that adequate programs be developed by qualified hospitals for the training of practical nurses.

5. Health Education

Public understanding of what can be done by the individual and by the community to reduce deaths and disability from the chronic

diseases is essential to a successful attack on these diseases. Heretofore, a few voluntary associations and insurance companies have concerned themselves to some extent with health education about the chronic diseases. School systems and health departments have devoted their health education efforts primarily to the communicable diseases with only sporadic and fragmentary attention to chronic diseases. Health departments and schools as well as professional groups could contribute significantly to the solution of the chronic diseases problem by increasing public knowledge concerning it.

It is recommended that expanded programs for education of the public on cancer and the other chronic diseases and on accident prevention be conducted by voluntary organizations interested in health, by professional societies, hospitals, educational institutions, and health departments.

6. Diagnostic and Therapeutic Services

The diagnostic and therapeutic services essential for an effective chronic disease program are inseparable from medical care services as a whole. Based on preliminary but necessarily incomplete information it appears that diagnostic and therapeutic services are generally available in the urban areas of California but are not readily accessible to persons living in certain rural parts of the State. Measures are needed to make known the availability of these services in urban areas and to attain greater accessibility and coordination in the rural areas. Improvement of quality in diagnostic and therapeutic services must be constantly sought through such means as postgraduate education. Intimately related to the problem of diagnostic and therapeutic services is the great need in California for further hospital and nursing home beds for the chronically ill.

It is recommended that local communities with the guidance and support of local professional societies and health departments work toward the goal of making available adequate diagnostic and therapeutic services either in their own communities or through arrangements with nearby communities.

7. Hospital Care Services

Hospital facilities for chronic illness, equal in quality to those for acute illness, are needed to bring the best of modern medical care to those with chronic disease. As noted in the report "Hospital Facilities In California" by the State Department of Public Health, "* * * there is danger in the present drive for more hospital beds that attention would be centered too greatly on acute general beds when a substantial share even of the need for them could be met by the planning of chronic disease facilities as a part of general hospitals." It was noted in the same publication (March, 1948) that there were only 3,434 acceptable hospital beds for chronic care in California compared with an estimated need of 18,684. This lack of beds for chronically ill patients increases the load on already hard pressed facilities for acute patients, especially in the county hospitals.

Many communities in California are now using as general hospitals for acute patients facilities which are unacceptable as defined in the

above-cited report. The conversion of these facilities to use for chronically ill patients is not a satisfactory solution to the problem of chronic care. Additional funds are needed to meet the demand for chronic disease beds in California. Hospital facilities for the chronically ill should be closely associated functionally and geographically with general hospitals and should serve to stimulate clinical interest and research in the chronic diseases. On a long-range basis the need for tuberculosis and possibly other facilities will decrease and the conversion of those which are suitably located and constructed into facilities for the chronically ill may eventually be desirable.

It is recommended that the California Advisory Hospital Council devote appropriate attention to hospital beds for the chronically ill in establishing priorities during the remaining period of the state hospital construction program; and that additional resources be sought to aid: (a) the construction of other facilities for the chronically ill—construction consistent with the recommendations of the California hospital survey, and (b) the development and expansion of custodial, nursing home, home care, and rehabilitation services, to ease the demand for hospital beds. (For more detailed recommendations on hospital care services, see page 29.)

8. Other Institutional Care Services

After maximum benefit has been received from hospitalization, many chronically ill patients need further care either in nursing homes or custodial facilities. At present there are approximately seven thousand nursing home beds in California. All authorities agree that additional nursing home facilities for both private and public patients are critically needed. Cost of such care is one of the prime problems. Custodial facilities in California are inadequate and vary greatly in quality of care provided. Some serve merely as a "dumping ground" for many types of patients. In addition to persons requiring nursing or custodial care there are many for whom substitute (boarding) home care would suffice. Development of nursing, custodial, and boarding home care is greatly needed.

It is recommended that sufficient nursing, custodial and substitute home care facilities which meet adequate standards be made available by local communities to care for the needs of the chronically ill. These facilities should be correlated with the hospitals of the communities. In the smaller communities particularly, consideration should be given to placing nursing and custodial units adjacent to general hospitals.

9. Rehabilitation Services

Persons with chronic illness are too frequently regarded as hopeless invalids. Many who are now dependent on others for daily care can be brought to the point of taking care of themselves. It has been demonstrated that rehabilitation services can get large numbers of chronically ill persons back into productive employment. Instead of remaining on welfare rolls they become self-sustaining members of the community. Vocational rehabilitation services, and more recently rehabilitation centers which serve the handicapped population irrespective of vocational

status, have been available in California. These, however, are limited programs. The state program, which is now covering an estimated 15 percent of the vocationally handicapped, is particularly inadequate in the rural areas. Of equal importance is the development of rehabilitation service as part of the general hospital and medical care services throughout California.

It is recommended that rehabilitation services be expanded, with particular emphasis on the needs of vocationally handicapped persons living in rural areas. A special study should be initiated—jointly by official and voluntary organizations concerned with the problems of rehabilitation—to determine the most effective methods for establishing rehabilitation services for all elements of the population who would benefit, not merely those who would gain vocationally.

10. Home Care Services

Hospital care would be unnecessary in many instances if proper home care services were available. It has been demonstrated that the cost of adequate home care for the chronically ill is less than that of institutional care; and the patient is often happier while receiving care in his own home. Diagnostic and therapeutic services, including specialist care, are required for chronically ill persons living at home. Bedside nursing care, housekeeper service and medical social service would all reduce the need for the more expensive institutional care, yet all three are conspicuously inadequate especially in the rural areas of the State. A key problem is the provision of bedside nursing service in which practical nurses might be extensively used.

It is recommended that local communities develop comprehensive home care programs for the chronically ill including diagnostic and therapeutic services, bedside nursing, medical social service, and housekeeping service. These should be integrated with the hospital and other services.

11. Future Chronic Disease Program

Up to the present time there has been no agency in California which has been charged with or which has assumed responsibility for study of the chronic disease problem; and for coordination of activities related to the control and prevention of chronic disease or to the facilities and services available for the chronically ill. Even the foregoing brief statement of the chronic disease problem indicates its complexity and emphasizes the need for permanent study, continuing recommendations and intelligent coordination of activities in this field. Chronic illness concerns not only the chronically ill and their families, but also the community. In fact, the primary responsibility for providing services to the chronically ill rests with the individual and the local community. Continuous study of the problems related to chronic illness by an agency representing the state as a whole, is in the public interest. Public interest also requires that the agency designated to carry out this purpose must adequately represent all groups that are concerned with the chronically ill. As this report has demonstrated, research, preventive services, statistical studies, rehabilitation, health education, professional services, hospital and institutional care, and home care services—all play a part in an over-all

approach to the control of chronic disease and the amelioration of its effects. A representative agency to observe, assist, encourage and coordinate these activities at the state level is both warranted and essential. However, emphasis must still remain on the responsibilities of local communities.

It is, therefore, recommended that the Legislature authorize a chronic disease program by enacting the following specific proposals:

(a) That there be established within the State Department of Public Health an advisory chronic disease council; that this council contain adequate representation from professional groups concerned with chronic diseases and from the public at large, with the director of the department, a member ex officio; and that the members of the council serve for stated terms and be appointed by the Governor from a list of nominees selected jointly by the State Director of Public Health, the chairman of the Senate Standing Committee on Public Health and Safety, the chairman of the Assembly Standing Committee on Public Health, and the president of the California Medical Association. This council should advise and assist the department in the coordination of the various phases of the chronic disease program outlined in this report, and in its responsibility for encouraging local communities to provide adequate services for the chronically ill. The department, with the advice and assistance of the council, should submit to the Governor and the Legislature prior to each regular session of the Legislature a full report on chronic disease prevalence, control, prevention, facilities and care in the State;

(b) That the specific needs of California research institutions for additional physical facilities, essential to the conduct of expanded research programs on the chronic diseases, be determined. Such determination should be made by the State Department of Public Health in cooperation with the research institutions and appropriate professional societies;

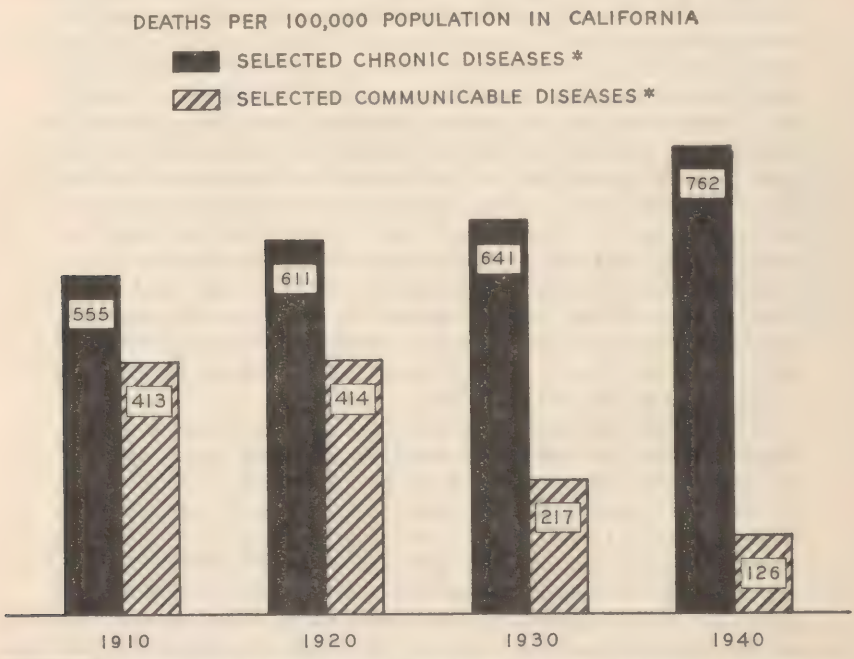
(c) That the State Department of Public Health should maintain statistical services on a continuing basis as part of a chronic disease program. Special attention should be directed to the development of methods and sources for obtaining current data on chronic illness, without universal, regular reporting of individual cases of all chronic diseases. The tumor registry should be expanded on a voluntary basis to include all hospitals and clinics, and where practicable, private physicians—with at least partial reimbursement for the expenses of reporting.

(d) That the State Department of Public Health assist in the planning of programs of advanced professional education and training in the field of the chronic diseases. For financing such programs, state funds should be made available where there is a demonstrated need to augment contributions of professional societies for professional education. No claims should be made, by agencies of the State, on the services of individuals trained through the use of such funds.

A CHRONIC DISEASE PROGRAM FOR CALIFORNIA

MAGNITUDE OF CHRONIC DISEASE PROBLEM IN CALIFORNIA

Chronic diseases are the leading causes of death and illness in the population of California today. A very substantial number of those affected by chronic illness are young and middle aged persons, although the likelihood of developing a chronic disease does increase as people grow older. Each year more and more persons in California are being counted among the victims of the chronic diseases. The diseases cause tremendous economic loss, as well as suffering, disability and death.



* The definition of chronic illness usually used is "illness (excluding pulmonary tuberculosis and mental disease) lasting a period of three months or more which prevents the patient from following his customary daily routine and which necessitates medical or nursing care at home or in an institution." For purposes of compiling statistical data, however, it is often necessary to use a definition of chronic illness based on specific diagnoses. For such statistical purposes the chronic disease advisory committee selected the diseases listed below. This list is by no means all-inclusive since many other diseases also cause long periods of illness.

Cancer and other tumors
Cardiovascular-renal diseases
Diabetes mellitus
Rheumatism and arthritis
Alcoholism
Cirrhosis of the liver
Anemias
Multiple sclerosis
Chronic pulmonary disease (nontuberculous)
Ulcer of the stomach or duodenum
Diseases of the female genital organs and breast
Diseases of the bones, joints and organs of movement
Diseases of the organs of hearing and vision
Senility

The toll of death on the California population from these selected chronic diseases (excluding multiple sclerosis and chronic pulmonary disease for which mortality data were not available on a trend basis) has been compared with the toll of death from the following communicable diseases: Pneumonia and influenza; tuberculosis (all forms); diarrhea and enteritis; typhoid fever; scarlet fever; whooping cough; diphtheria; measles.

Deaths From Chronic Disease in California

During the past several decades there has been a sharp and steady increase in chronic disease deaths and death rates, whereas mortality from communicable diseases has declined.

TREND OF MORTALITY: CALIFORNIA 1910-1940

	Selected chronic diseases		*Selected communicable diseases*	
	Total deaths	*Deaths per 100,000 population*	*Total deaths*	*Deaths per 100,000 population*
1910	13,187	554.6	9,810	412.6
1920	20,934	610.9	14,199	414.3
1930	36,372	640.7	12,341	217.4
1940	52,610	761.6	8,700	126.0

In 1947 chronic diseases accounted for 66,518 deaths in California—more than two-thirds of the total number of persons who died in the State that year. Forty percent of these chronic disease deaths occurred in persons under 65 years of age.

Among all causes of death in California, diseases of the heart and cancer occupy first and second place respectively. Other chronic diseases that are important causes of death are intracranial lesions of vascular origin (brain hemorrhage and apoplexy), nephritis, arteriosclerosis, diabetes mellitus and cirrhosis of the liver.

Each of these diseases—and cancer particularly—takes the lives of a substantial number of people in the early and middle periods of life. Half of all people who die of cancer are under 65 years of age, and many die of cancer of accessible sites such as the breast, uterus, skin and buccal cavity—sites where large savings of life can be expected with early diagnosis and treatment. It has been estimated that 30 percent of the patients who now die of cancer could have been cured * had they received prompt and adequate treatment early when the lesion was first discoverable.

DEATHS FROM MAJOR CHRONIC DISEASES: CALIFORNIA 1947

	Total deaths	*Under 45*	*45-64*	*65 and over*
Diseases of the heart	32,535	1,562	10,212	20,761
Cancer	13,681	1,320	5,473	6,888
Intracranial lesions of vascular origin	7,652	263	1,890	5,499
Nephritis	3,903	395	1,167	2,341
Arteriosclerosis and other diseases of the circulatory system	2,880	111	431	2,338
Diabetes mellitus	2,027	121	689	1,217
Cirrhosis of the liver	1,801	395	943	463
Other selected chronic diseases	2,039	407	729	903
Total selected chronic diseases	66,518	4,574	21,534	40,410

Estimates of Chronic Illness in California

The number of people who die each year from the chronic diseases is only a fraction of the total number of persons who suffer from chronic illness. Diabetes, rheumatism, alcoholism and epilepsy are far more important as causes of illness than as causes of death.

The amount of chronic illness in the general population of California is not known precisely, and there is great need for more adequate

* That is, these persons would have survived at least five years without evidence of the disease.

current information in this field. In the absence of actual illness data for the general population of the State, estimates based on the National Health Survey (1936-1937) are used here as they have been used in other studies of chronic disease. The estimates are as follows:

DISABLING CHRONIC ILLNESS

National Health Survey Findings Applied to California: 1947

	Estimated number of cases	*Estimated weeks of disability*
Cardiovascular-renal diseases	109,000	1,900,000
Rheumatism and allied diseases	58,000	1,000,000
Cancer and other tumors	29,000	410,000
Diabetes mellitus	9,000	220,000
Chronic illness causing permanent disability	104,000	5,410,000
All disabling chronic illness	455,000	9,090,000
Under 25	71,000	
25-64	285,000	
65 and older	99,000	

These estimates are minimal and exclude many early or mild cases of chronic illness because they refer only to *disabling* illness—illness causing at least seven consecutive days of interference with usual occupation. The estimate for cancer is particularly low. During 1947 there were about 14,000 cancer deaths in California, and from this (using a ratio of 3.5 cases per death) it can be estimated that there were approximately 50,000 cases of cancer alive at some time during the year. Recent investigations in selected areas have demonstrated that diabetes is much more prevalent than has been supposed and that there probably are 100,000 diagnosed cases of diabetes in California (approximately 1 percent of the population).

Accurate estimates cannot be made of the number of undiagnosed cases of chronic disease, although indications can be cited for heart disease and diabetes. A Los Angeles study of miniature X-ray films together with follow-up examination of suspicious cases showed that about 1 percent of the population surveyed had clinically significant, previously unknown heart disease. This indicates that for California as a whole there may be 100,000 persons with unrecognized heart disease.

Tests for diabetes were made on over two-thirds of the population of Oxford, Massachusetts, in a recent survey. In addition to those known beforehand to have the disease, previously unrecognized diabetes was found in 0.7 percent of those tested. Applying this ratio to California it can be estimated that there may be as many as 70,000 persons in the State who have diabetes but are not aware of it.

Data From the California Disability Insurance Program

The California disability insurance program provides the only available current data on illness and disability in a sizeable, though selected, segment of the population of the State. Approximately two and one-half to three million employed persons are covered under the disability insurance program which offers partial compensation for wage loss due to illness. Although the sample is large, it should be noted that the data from this program do not necessarily reflect the extent of illness and disability in the total population.

During the first year of operation (1947), the California Disability Insurance State Plan paid benefits for 89,160 spells of disability, of which 37,715 (42 percent) were due to chronic diseases. More than seven million dollars were paid out of the State Disability Fund for a total of 380,000 weeks of chronic illness. This sum by no means covers even the total wage loss. Also costly was the associated loss of productivity, as well as the expense of medical care, hospitalization and ancillary services required for most extended periods of disability. In 30 percent of the spells of chronic disability, benefits were exhausted; that is, the maximum benefits to which the claimants were entitled were paid. It is probable that most of these claimants were still disabled after their insurance benefits were exhausted.

The cardiovascular-renal diseases, cancer and other tumors, rheumatism and arthritis, alcoholism and diabetes accounted for more than one-fourth of the paid spells of disability and nearly one-third of the amount of money paid for all disabilities during 1947.

DISABILITY INSURANCE—STATE PLAN

Paid Spells of Disability Reported Terminated, 1947

	Number of paid spells of disability	*Number of weeks paid*	*Amount paid*
Cardiovascular-renal diseases	13,425	154,845	$2,952,075
Cancer and other tumors	5,609	53,901	1,027,169
Rheumatism and arthritis	3,184	35,014	660,986
Alcoholism	796	7,737	142,240
Diabetes mellitus	540	5,833	111,659
Other selected chronic diseases	14,161	123,123	2,325,970
Total selected chronic diseases	37,715	380,453	$7,220,099
Under 45	14,698		
45-64	17,797		
65 and older	4,128		
Unknown age	1,092		
All disabilities	89,160	804,027	$15,267,016

Population and Chronic Disease

The magnitude of all aspects of the chronic disease problem in California is directly related to population changes. Not only is this problem—as are many others—intensified by the great increase in population, but it is also intensified by the increasingly large numbers of persons in the middle and older age groups. Disability and deaths due to chronic diseases, although found in all age groups, increase in prevalence as age increases. The census of 1870 reported only 12 percent of the California population to be 45 years of age or older. By 1900 this group had increased to 22 percent, and by 1940 it had reached 31 percent. This trend will probably continue. As medicine and public health continue to make progress in the field of communicable disease control, more and more persons will live to the ages in which the chronic diseases are most prevalent.

Effects of Chronic Illness

Chronic illness often has a devastating influence on the family in which it occurs. The resources of the average family may not be completely overwhelmed by the cost of acute illness. Chronic illness, however, frequently keeps the family breadwinner away from work for many

weeks or months and results in severe economic handicap or even complete economic dependency. Chronic illness in a housewife disrupts care of children and the running of a household, and in many cases causes break-up of the family unit.

To almost every community chronic illness is a heavy burden. A substantial share of the clients of welfare agencies are chronically ill persons who often have become dependent primarily because of long-term illness. The extended periods of care required by chronically ill persons result in great demands on the medical, hospital and related services of each community—services which frequently are strained to meet even the needs of acute cases.

In recent years striking advances have been made in the prevention and treatment of many acute diseases. Although few such dramatic advances have been made with regard to the chronic diseases, substantial reduction of death and disability from cancer and other chronic diseases is possible with present medical knowledge. Proper application of this knowledge would improve both the health of the citizens and the economy of the State.

NECESSARY SERVICES AND FACILITIES FOR AN EFFECTIVE CHRONIC DISEASE PROGRAM

1. Research

Advances in the control of the chronic diseases depend largely on medical research. Such research is aimed at gaining knowledge of: (1) Physiological and pathological processes, (2) the natural history of diseases, (3) diagnosis of conditions, and (4) methods for the cure or alleviation of disease.

The chronic diseases cannot be studied alone because chronic disease may be the outcome or end-point of acute disease. One cannot be too emphatic about the fact that research into chronic disease must become a part of the general investigative effort in medicine. It must be integrated with the general pattern of research in institutions already existing. But there should be increased effort and efficiency through adding facilities (buildings, equipment, etc.) and attracting increasing numbers of interested persons to the field of chronic disease.

Medical scientists may be attracted by better physical facilities, better clinical facilities and closer association with the basic sciences, as well as by better financial income to themselves. Best results in research are obtained by coordination of many allied interests. It is necessary to have laboratory buildings, the clinical material found in teaching institutions and hospitals, and scientists nearby who are investigating allied fields. Such research groups can usually be found in the centers of higher learning or in large general hospitals. Within the boundaries of California there are several medical schools and other research institutions.

It is axiomatic that adequate research can be conducted only by those qualified men and women who have the appropriate interest. The scientist should not have his efforts subject to control beyond the primary direction of effort to special subjects suitable for investigation by him.

From the standpoint of the quantity and quality of its research institutions California has a unique position. Many first-rate institutions already exist within the State. Further development awaits only additional funds for physical facilities and personnel.

There are many sources of funds for investigation along special chronic disease lines such as the: (1) American Cancer Society, (2) National Foundation for Infantile Paralysis, (3) American Society for the Study of Hypertension, (4) American Heart Association, (5) American Rheumatism Association, (6) National Tuberculosis Association, (7) the groups organized for the study of alcoholism, and many others. There is another reservoir of funds which is now only occasionally being tapped; namely, funds from industries for the investigation of problems in which they have an interest. Examples are: (1) the dairy industry for study of brucellosis, (2) the canning industry for research into nutrition and botulism, and (3) the meat packers and frozen food industry for studies in nutrition.

In addition, state funds might well be used to investigate diseases directly affecting the public health and resulting in chronic conditions, such as certain communicable diseases.

It is recommended that the specific needs of California research institutions for additional physical facilities essential to the conduct of expanded research programs on the chronic diseases be determined. Such determination should be made by the State Department of Public Health in cooperation with the research institutions and appropriate professional societies.

2. Preventive Services

Preventive services in the field of chronic disease must be based on:

(a) Our present medical and public health knowledge of these diseases, and

(b) Continuing and expanding research in methods of preventing chronic diseases and chronic disability, and methods of preventing premature deaths from these diseases.

If effective use were made of existing knowledge and techniques, a considerable amount of chronic illness could be prevented and chronic disability could be reduced. Certain factors are known to be related to some of the chronic illnesses: obesity to heart disease and diabetes; diet to kidney disease; specific occupational conditions to cancer, particularly skin cancer; certain acute diseases, such as rheumatic fever, to heart and other chronic diseases; and some apparently minor conditions, "precancerous lesions," to cancer. The prevention of accidents will reduce the number of injuries which today are causing a large amount of chronic disability.

Early discovery of, and prompt medical care for, many chronic diseases are basic factors in preventing disability and premature death from these diseases, e.g., cancer, diabetes, diseases of the heart. Economical "screening" methods for the detection of these diseases are being developed and some are now ready for wide-scale application.

In contrast to the extensive use of preventive measures for the communicable diseases, we have only begun to make use of preventive measures in the field of the chronic diseases. Although the specific measures may vary, the basic public health approach to the chronic diseases is the same as to the communicable diseases, i.e., the effective mobilization of community resources to carry out the recommendations of medical, public health, and allied sciences.

In California, we have the medical and public health resources to put our present knowledge to work. The effective utilization of these

resources should be aimed at assisting the people in a program of chronic disease prevention through:

(a) Reorienting medical, public health, and other professional groups to an increased emphasis on chronic disease prevention;

(b) Helping the people learn how to prevent chronic illness and disability and stimulating the people to use this knowledge;

(c) Preventing communicable diseases which lead to chronic conditions;

(d) Adjusting environmental conditions to reduce chronic disease hazards;

(e) Detecting chronic diseases in their early stages, including development of mass-screening methods; and

(f) Conducting research in the prevention of chronic illness and disability including the mental factors involved.

It is recommended that the development and utilization of preventive services for the chronically ill be undertaken by local health agencies with the cooperation and approval of local professional societies. The preventive program should include professional and public education concerning the chronic diseases, mass-screening methods (where proven medically sound) for early detection of chronic diseases, intensification of communicable disease control programs with specific emphasis on those diseases leading to chronic conditions, and accident prevention activities.

3. Statistical Services

Statistical research in a chronic disease program should develop and utilize current information on chronic disease incidence, prevalence, disability, and mortality—by age, sex, race, residence, occupation, and other demographic characteristics of the population.

The use of such statistical services has been demonstrated in part in the collection, analysis, and presentation of data for the present chronic disease investigation. These services, which should be provided on a continuing basis as part of a chronic disease program, are not now regularly provided by official or voluntary agencies in California.

Although general mortality data are obtained by the State Department of Public Health from death certification, there is no specific authorization for continuing studies and analyses of chronic disease mortality in California.

With respect to morbidity (i.e. illness) statistics, not until recently have efforts been made to tap the various sources of chronic disease morbidity data within the State. For example, through the use of federal funds for cancer control, a tumor registry has been established in the State Department of Public Health. The tumor registry is regarded as a basic element in the cancer control program, but now includes only a minority of institutions in the State treating cancer. If extended throughout the State it would provide data for epidemiological studies, indicate types of cancer for concentration of control efforts, serve to measure the progress of control programs and stimulate professional educational activities.

General morbidity data for a large segment of the employed population of the State have been made available by the State Department of Employment from diagnostic information on disability insurance claims.

The data from this new disability insurance program will become increasingly valuable as they accumulate over a period of years. However, in view of the inherent limitations of these data, other sources of illness data are needed to complete the fragmentary picture obtained from the disability insurance program.

As yet there is no mechanism established for obtaining current data on chronic disease morbidity pertaining to the general population.

The State Department of Public Health should maintain statistical services on a continuing basis as part of a chronic disease program. Special attention should be directed to the development of methods and sources for obtaining current data on chronic illness, without universal, regular reporting of individual cases of all chronic diseases. The tumor registry should be expanded on a voluntary basis to include all hospitals and clinics, and where practicable, private physicians—with at least partial reimbursement for the expenses of reporting.

4. Professional and Vocational Training and Education

For the effective accomplishment of any broad and comprehensive plan of activity in the chronic disease field a program of education must be provided for each professional group involved. This program should be directed: (1) To the continued professional improvement of the individuals in each classification; and (2) to the broader understanding of the program as a whole and the integration of all services and activities involved.

Among physicians active postgraduate programs are already under way sponsored by the California Medical Association, many of the county medical societies, the local, state and national voluntary health associations (as in cardiovascular disease and cancer), and the medical schools. Some administrative aid and financial assistance have been provided through the State Department of Public Health. Constant efforts are being made to extend these educational advantages to physicians practicing in the outlying areas.

Other professional groups, such as dentists, hospital administrators, nurses, medical social workers, etc., already have state-wide and local organizations. These organizations provide educational programs of varying extent for their membership. In the development of a coordinated chronic disease program all groups will need to be indoctrinated as to the over-all plan so as to promote effective relationships among the professions involved. Of particular importance in the care of the chronically ill is the development of adequately trained and supervised practical nurses.

It is recommended that the professional educational and training programs of state and local professional societies be expanded and cooperative planning undertaken with the postgraduate training programs of the several professional schools and voluntary health agencies: and that the State Department of Public Health assist in the planning of programs of advanced professional education and training in the field of the chronic diseases. For financing such programs, state funds should be made available where there is a demonstrated need to augment

contributions of professional societies for professional education. No claims should be made on the services of individuals trained through the use of such funds.

It is further recommended that adequate programs be developed by qualified hospitals for the training of practical nurses.

5. Health Education

Health education aims to create an understanding of good health habits and to motivate behavior contributing to the improvement of the health of the general public. A basic element in health is morale, i.e., the effective desire for good health that leads to action for attaining and preserving a state of complete physical and mental well-being. Health education should build health morale for the individual, the family, and the community.

Many individuals fail to seek proper medical care even when it is available—either because they do not understand or are not sufficiently impressed with the necessity for obtaining it, or do not know how to go about getting it. Consequently many diseases reach a stage of chronicity before they are even discovered.

Health education programs are now being conducted in California by a number of agencies. Among these should be mentioned the school systems, voluntary health associations, professional groups, and health departments. The American Cancer Society, the American Heart Association and many other voluntary groups have started campaigns to teach the public the facts about particular chronic diseases, and what should be done about them. The medical profession has supported these efforts.

Health departments have not engaged extensively in organized educational activities directed to the control of the chronic diseases. These public agencies have skilled health education personnel and other resources which should be used in the chronic disease program. Councils of social agencies and other community organizations have begun to engage in those health education activities designed to make their communities actively aware of the chronic disease problem, of the available services and facilities to meet this problem, and of the need for additional services and facilities.

In California, school health services are almost as varied as the communities. They range from very excellent in some areas to very limited services in others. The experiences of many communities need to be collected and made available to people in other areas.

Only a beginning has been made in school health education concerning the chronic diseases. In many instances this responsibility has been left to a school nurse who is so busy keeping routine records that she has insufficient time for educational work. In order to be really effective, school health education in the field of the chronic diseases must be given at least the same amount of attention as that now directed toward immunizations, venereal disease, and tuberculosis. Health education should not be conducted in haphazard fashion, but should be the responsibility of trained personnel with definite goals in mind.

Besides class room instruction an adequate school health program in California should include among its efforts directed against the chronic

diseases: a more complete examination of school children, improved follow-up of those with defects, and better health training of teachers. Many teachers in our schools have had little or no training in health education. A teacher well trained in health is an invaluable asset in the detection of some chronic diseases.

It is recommended that expanded programs for education of the public on cancer and other chronic diseases and on accident prevention be conducted by voluntary organizations interested in health, by professional societies, hospitals, educational institutions, and health departments.

6. Diagnostic and Therapeutic Services

Diagnostic and therapeutic services are inseparable from medical care as a whole. They can be performed only by persons with sufficient training and proper knowledge. They entail detailed examination and treatment of individuals suffering from illness. Special techniques and skills, including laboratory and X-ray studies properly coordinated, are often needed to help determine the condition of the individual and the treatment needed.

Diagnostic and therapeutic services are available in California to the indigent, through: (a) The staffs of the county hospitals; (b) the staffs of free clinics in connection with teaching hospitals, teaching institutions and certain general nonprofit hospitals; and (c) the staffs of special clinics, (e.g. venereal disease) either attached to institutions or operated by departments of public health. Individuals in low income groups who are above the indigent class may obtain these services from the personnel of part-pay clinics where these exist attached to teaching institutions, general hospitals or organized private clinics. The individual who is able to pay may obtain diagnostic and therapeutic services through private physicians.

While these services are generally available in the urban areas of California, measures to make known their availability are needed. In the rural areas, more services are needed, and greater accessibility and coordination should be developed.

Facilities for the care of chronic illness seem to be more lacking than physicians. These facilities include: (1) Hospitals of all categories—private, nonprofit, and public; (2) nursing homes, both public and private; (3) custodial institutions; (4) clinics, which are free, part-pay or full-pay; and (5) offices of private physicians. The distribution of these facilities throughout the State varies considerably. Metropolitan areas with large segments of population possess more of these facilities and personnel than do the rural areas of the State. Travel to get to some of the larger centers when necessary is sometimes difficult and many feel that coordination among the services is lacking.

Services for the care of special types of chronic illness should be integrated with the general medical care pattern of the community. It is not feasible to separate the care of one type of chronic illness from another. For example, the care of epilepsy does not require different physical facilities from those needed in the care of other chronic or recurrent illness; it does require the development of personnel and

laboratory service of a different character from that which might be used in other sections of the same hospital.

It is to be emphasized that diagnostic and therapeutic services should be not only quantitatively available but also constantly improved in quality. A definite program is needed for the continual betterment of diagnostic and therapeutic services through such means as post-graduate education.

The agencies which should be stimulated to develop diagnostic and therapeutic services should be away from centralized authority and largely in the communities where needs are best understood.

It is recommended that local communities with the guidance and support of local professional societies and health departments work toward the goal of making available adequate diagnostic and therapeutic services either in their own communities or through arrangements with nearby communities.

7. Hospital Care Services

Hospital facilities for the chronically ill may be classified into three broad groups: (1) Special facilities for the treatment of chronic illness—facilities adjoining large general hospitals and operating in conjunction with or as part of the general hospital; (2) general hospitals which have rooms, wards, sections, or pavilions assigned for the treatment and care of chronically ill patients (this is a modification of (1) above); and (3) separate and independent hospitals which specialize in the treatment and care of chronic illness.

The State Department of Public Health, the agency designated to carry out the provisions of the Federal Hospital Survey and Construction Act applicable to California, reported in a recent publication on "Hospital Facilities in California" that:

"The maldistribution of hospital facilities between rural and urban areas and the need for more beds in general are recognized, as is the public responsibility to correct these inadequacies. But there is danger in the present drive for more hospital beds that attention will be centered too greatly on acute general beds, when a substantial share . . . of the need for them (acute general beds) could be met by the planning of chronic disease facilities as a part of general hospitals."

In the same publication, "Hospital Facilities in California," the following table was presented showing the relative shortage of beds by category, as of March, 1948:

	Estimated need	*Available acceptable*	*Shortage (including replacements)*
General	42,039	20,568	21,471
Mental	46,710	28,310	18,400
Tuberculosis	9,598	2,231	7,367
Chronic	18,684	3,434	15,250

The shortage of hospital beds for the chronically ill is obviously not an isolated problem—one apart from the over-all problem of hospitals and related facilities in California. The lack of beds for chronic patients increases the load on already hard pressed facilities for acutely ill patients. The lack of adequate nursing homes, custodial facilities, and home care services also contributes to the load on facilities for the acutely ill and tends to convert the few existing hospital facilities for the chronically ill into custodial institutions.

For the first two years (1947, 1948) of the five-year construction program under the state-wide plan, priority has been given to hospital beds for patients with acute illness. During the remaining three years, funds will be available for other types of facilities (e.g. chronic, tuberculosis, etc.), since it is required that, at the end of the five-year period, there be an adequate balance among the categories of facilities. Unfortunately, the construction which can be undertaken with the assistance of federal and state funds available under the five-year program will fall far short of meeting the needs for chronic hospital beds. It is doubtful whether even one thousand chronic hospital beds will be constructed under this federal and state assistance program, whereas the estimated need is approximately fifteen thousand additional beds.

It should be pointed out that the need for chronic disease facilities cannot be met satisfactorily by converting unacceptable acute hospital facilities for this purpose.

The recommendations listed below are more detailed than those presented in the Summary of Findings and Recommendations on page 15.

A. In establishing priorities for the third, fourth, and fifth years of the state-wide hospital construction program, the California Department of Public Health and the California Advisory Hospital Council should devote special attention to the need for additional chronic hospital beds in California. The department and the council, recognizing that only a small part of the total need can be met under this program, should encourage the type of chronic hospital construction which could serve as a pattern for this type of patient and also serve to stimulate clinical interest and research in the chronic diseases.

B. In approving applications for other types of facilities (e.g. tuberculosis) consideration should be given to the fact that on a long-range basis the need for such facilities will probably decrease, and that their conversion into facilities for the chronically ill may eventually be desirable.

C. In addition to the federally and state financed construction, every encouragement should be given to:

The construction of other chronic facilities consistent with the recommendations of the California Hospital Survey; and

The development and expansion of custodial, nursing home, home care, and rehabilitation services, to ease the demand for hospital beds.

D. Special facilities (whether private or public) for the care of chronically ill patients should be constructed adjoining general hospitals. Hospital care for indigent chronic patients should be available in both tax-supported and voluntary hospitals; for indigent patients, such care should be financed from tax funds.

E. The following recommendations of the California Hospital Survey are endorsed:

"That provision be made for the care of certain types of chronic disease in general hospitals in small communities.

"That regulation of nursing homes for the care of chronic patients be enforced to guarantee a high grade of service in this type of institution.

"That the medical staff organization in general hospitals, wherever possible, should include a chronic disease service under the guidance of staff men interested in this type of patient.

"In rural regions where the needs of the population justify the maintenance of separate nursing units, arrangements should be made for the establishment of such services for chronically ill patients in centrally located general hospitals."

8. Other Institutional Care Services

When maximum benefit has been obtained for the chronically ill from the intensive medical care available in hospitals, further institutional care with continuing medical and nursing supervision is often required. This may be provided in nursing homes, custodial facilities and substitute homes.

Each of these types of institutions is intended to meet the needs of certain patients. Nursing homes are designed for those who require daily nursing care, but not daily medical attention; general medical supervision is needed for patients in nursing homes. The function of custodial institutions is to provide a residential type of care for patients whose infirmities necessitate long-term attendant service. Substitute homes (boarding homes and private homes for the aged) constitute a valuable facility for persons who are able to care for themselves in a slightly protected environment but who have no homes of their own or who cannot be cared for in their own homes.

In 1948 there were in California the following institutional facilities (other than hospitals):

Type	*Number*	*Total number of beds*
Nursing homes	360	7,308
Custodial institutions		3,000 (approx.)
Boarding homes for aged	1,500	(each with 15 persons or less)
Private institutions for aged	76	5,000 (approx.)

Recent inspections of these facilities show a wide range in standards of care; some could be rated excellent but many provide only the most meagre care. Accommodations for custodial patients are particularly inadequate, with care often comparable only to that of the ancient almshouse. The critical need for more beds for nursing care and custodial care was almost unanimously cited in replies to questionnaires directed to local professional groups throughout the State (physicians, hospital administrators, welfare directors and health officers).

Nursing homes in California are operated exclusively under private auspices. The number has not increased to meet the needs because of the discrepancy between the high cost of operating these units and the limited funds available to patients who should have the care. The question of governmental subsidy for such care or construction of nursing home facilities deserves further study.

The 3,000 custodial beds available in California are for the most part in county institutions and are used for indigent persons, many of

whom are aged. In many counties, the custodial unit serves as a "dumping ground" for placement of all types of patients whose individual needs are not ascertained. Often no real study is made of the physical condition of the patients or what could be done to rehabilitate them.

The problem of care for chronically ill persons in nursing and custodial facilities is complicated by the provision of the Social Security Act which cuts off the Federal share of grants for Old Age Security and Aid to Needy Blind when recipients enter public institutions. In California, the State's share of these grants is paid to the counties when the recipients enter county facilities. For the month of June, 1948, such subvention payments totaled $63,500 with the average payment per case approximately $27. It should be noted that these subvention payments have no relation to the cost of care required by patients or the quality of care rendered.

Substitute home facilities in California are provided to some extent by boarding homes and private institutions for the aged. County welfare directors report an urgent need for more substitute home facilities at costs which can be met by welfare clients and others with fixed marginal incomes. While substitute home facilities are not intended for bed patients, it has been found that many of those admitted become bedridden and require considerable nursing care. Provision is now rarely made for the transfer of such patients to more appropriate facilities.

It is recommended that sufficient nursing, custodial, and substitute home care facilities which meet adequate standards be made available to care for the needs of the chronically ill. These facilities should be correlated with the hospitals of the communities. In the smaller communities particularly, consideration should be given to placing nursing and custodial units adjacent to general hospitals.

9. Rehabilitation Services

Rehabilitation service is aimed at the restoration of handicapped individuals to the fullest physical, mental, social and economic usefulness of which they are capable. Thus far efforts in this field have been directed largely to the vocationally handicapped. Another group deserving of attention are invalids who are now dependent on others for daily care but who could be made capable of taking care of themselves. Rehabilitation of a bed-fast patient to the point of walking represents a substantial saving in family and often times community cost, even though the patient may not be employable after treatment.

Tremendous strides have been made in physical medicine and related services during and since the recent war. Newspaper accounts of legless persons driving automobiles and persons bed-fast for years who now fully care for themselves and earn a living are dramatic illustrations of the advances being made.

In California rehabilitation services are limited almost exclusively to the vocationally handicapped.

The California Vocational Rehabilitation Act passed in 1921 accepted the provisions of the Federal Vocational Rehabilitation Act passed by Congress in 1920. There has been no additional legislation. The Bureau of Vocational Rehabilitation of the California Department

of Education provides the following services to individuals with a demonstrable employment handicap: vocational guidance and counselling; medical, psychiatric and dental examinations and treatment; hospitalization; nursing care; physical and occupational therapy; prostheses; training; and placement.

These services are rendered through six district offices, seven branch offices and eight local offices (the latter set up primarily to refer high school children to district and branch offices). There are at present about eighty training officers for a population of ten million. Since this number of workers is only touching an estimated 15 percent of the problem, it is obvious that many areas, especially the rural areas, have inadequate services. Appropriations for the Fiscal Year 1948-1949 total $2,246,000. The Federal Government provides approximately 70 percent of these funds including the entire cost of administration. Under the present law state funds may not be expended for administrative purposes.

The Bureau of Vocational Rehabilitation has been reluctant to accept for services severely handicapped persons. To some extent this reluctance is due to questionable employability after maximum rehabilitation. Another factor is the lack in California of rehabilitation centers where highly specialized personnel and equipment can be concentrated for the rehabilitation of the most difficult cases. These centers could serve not only the vocationally handicapped (under the state program) but all elements of the population who would benefit from the services. Such centers should be integrated with general hospital services.

Although the bureau attempts to provide complete service so far as possible, there are several factors which do limit certain benefits: e.g. hospitalization may not exceed ninety days unless special authorization is obtained; the maximum amount which can be paid to any one physician for any case during any period of 12 consecutive months is $350; training is generally limited to a period not to exceed two years. A "successfully rehabilitated" person is one who is employed in a productive occupation suited to his ability and is earning at least one-half of the legal minimum wage. For the year ending June 30th, 1948, there were 4,406 persons successfully rehabilitated after eight to nine months of services (median) at a cost of $383.94 per case (average).

Statistical data maintained by the bureau are designed principally to furnish information for federal reports and are inadequate for program evaluation and program planning. Current information on the number of handicapped persons of employable age in California is not available nor is information on the number of such persons who are receiving services from agencies and sources other than the Bureau of Vocational Rehabilitation.

It is recommended that rehabilitation services be expanded, with particular emphasis on the needs of vocationally handicapped persons living in rural areas. A special study should be initiated—jointly by official and voluntary organizations concerned with the problems of rehabilitation—to determine the most effective methods for establishing rehabilitation services for all elements of the population who would benefit, not merely those who would gain vocationally.

10. Home Care Services

Hospital care would be unnecessary in many instances of chronic disease if proper home care services were available. The cost of adequate home care for the chronically ill has been found to be considerably less than that of hospital care; and the people are often happier while receiving care in their own homes.

The extent to which chronically ill persons can be cared for at home depends on the extent to which local communities have available the necessary services: physicians' care, visiting nurse services, medical social service and housekeeping service.

The chronically ill patient at home needs the care and guidance of a personal physician. General practitioners are more generally available throughout California than in the majority of states, though still insufficient in some of the less populated counties. Medical specialists may also be needed periodically by chronically ill patients at home. Formerly concentrated in the larger cities, there is a growing tendency for specialists to settle in the smaller cities and towns, especially through the influence of group practice. Improving transportation facilities are tending to make visits to specialists less difficult for ambulant patients.

Since chronic disease tends to create medical indigency it is most important to plan for methods to expand and extend the medical facilities available to this ever increasing group. This can be done in "outpatient clinics" preferably in connection with general hospitals where all diagnostic and therapeutic facilities are at hand and specialists are available for guidance and consultation, or by subsidizing care in the offices of private physicians. Neither of these methods has been sufficiently developed throughout the State.

Bedside nursing services make it possible for many patients to be cared for at home with their families—patients who otherwise would be occupying hospital beds.

In California, voluntary agencies such as the American Red Cross and the Community Chests have assisted in financing visiting nurse associations in approximately 30 communities, most of which are urban. At present only about 160 public health nurses are employed by these visiting nurse associations. There is roughly one visiting nurse to every 28,000 persons living in the 30 communities served, or one visiting nurse to every 50,000 of the State's total population. The public health nursing staffs of city and county health departments are not now in a position to offer bedside nursing service.

To provide adequate bedside nursing services for chronically ill persons throughout the State, it will be necessary to: (1) Increase the number of nursing personnel available for bedside nursing services; (2) develop bedside nursing services in rural areas; (3) expand existing services in urban areas; and (4) develop services in those urban areas which now are without them. Consideration should be given to development of these services through local voluntary societies, professional groups and the local health department. Qualified hospitals should establish courses of instruction in practical nursing, and recruitment activities for such courses should be conducted. Much wider use should be made of practical nurses working under the supervision of public health nurses, for duties which do not require the training and experience of a graduate nurse. Nursing care should be planned on the basis of the type

of personnel required to perform the needed functions. Public health nurses, registered nurses, practical nurses, and members of the family may each be utilized in certain situations.

Adjustment of the chronically ill patient to the personal and social problems of long-term illness can be greatly assisted by medical social service. The guidance of a medical social worker often makes it possible for a chronically ill person to make the change from hospital to home and to remain at home rather than in an institution. In California, medical social service is available only in a few areas. More widespread use of medical social services in local areas throughout the State should be encouraged. The activities of these workers should be integrated with those of community social service agencies and visiting nurse associations.

Housekeeping service makes it possible for certain chronically ill patients to remain at home. It is an important aid in caring for such chronically ill persons in their own homes, and in reducing the strain on medical, hospital, nursing and related services. The value of such service has been demonstrated in other areas of the country, particularly in New York City. In California, there is no organized housekeeping service of any magnitude, although in a few communities private welfare agencies occasionally offer a limited service. The development of housekeeping services in local areas throughout the State should be encouraged as an important means of caring for chronically ill persons in their own homes and reducing the need for hospitalization.

To show what can be accomplished through local planning and the integration of medical, hospital, nursing and welfare services, demonstration home care programs should be established in one or more areas of the State.

It is recommended that local communities develop comprehensive home care programs for the chronically ill including diagnostic and therapeutic services, bedside nursing, medical social service, and housekeeping service. These should be integrated with the hospital and other services.

11. Future Chronic Disease Program

Up to the present time there has been no agency in California which has been charged with or which has assumed responsibility for study of the chronic disease problem; and for coordination of activities related to the control and prevention of chronic disease or to the facilities and services available for the chronically ill. Even the foregoing brief statement of the chronic disease problem indicates its complexity and emphasizes the need for permanent study, continuing recommendations and intelligent coordination of activities in this field. Chronic illness concerns not only the chronically ill and their families, but also the community. In fact, the primary responsibility for providing services to the chronically ill rests with the individual and the local community. Continuous study of the problems related to chronic illness by an agency representing the State as a whole, is in the public interest. Public interest also requires that the agency designated to carry out this purpose must adequately represent all groups that are concerned with the chronically ill. As this report has demonstrated, research, preventive services, statistical studies, rehabilitation, health education, professional services, hospital and institutional care, and home care services—all play a part in an over-all approach to the control of chronic disease and the amelioration of its

effects. A representative agency to observe, assist, encourage and coordinate these activities at the state level is both warranted and essential. However, emphasis must still remain on the responsibilities of local communities.

It is, therefore, recommended that the Legislature authorize a chronic disease program by enacting the following specific proposals:

(a) That there be established within the State Department of Public Health an Advisory Chronic Disease Council; that this council contain adequate representation from professional groups concerned with chronic diseases and from the public at large, with the director of the department, a member ex officio; and that the members of the council serve for stated terms and be appointed by the Governor from a list of nominees selected jointly by the State Director of Public Health, the Chairman of the Senate Standing Committee on Public Health and Safety, the Chairman of the Assembly Standing Committee on Public Health, and the President of the California Medical Association. This council should advise and assist the department in the coordination of the various phases of the chronic disease program outlined in this report, and in its responsibility for encouraging local communities to provide adequate services for the chronically ill. The department, with the advice and assistance of the council, should submit to the Governor and the Legislature prior to each regular session of the Legislature a full report on chronic disease prevalence, control, prevention, facilities and care in the State;

(b) That the specific needs of California research institutions for additional physical facilities, essential to the conduct of expanded research programs on the chronic diseases, be determined. Such determination should be made by the State Department of Public Health in cooperation with the research institutions and appropriate professional societies;

(c) That the State Department of Public Health should maintain statistical services on a continuing basis as part of a chronic disease program. Special attention should be directed to the development of methods and sources for obtaining current data on chronic illness, without universal, regular reporting of individual cases of all chronic diseases. The tumor registry should be expanded on a voluntary basis to include all hospitals and clinics, and where practicable, private physicians—with at least partial reimbursement for the expenses of reporting;

(d) That the State Department of Public Health assist in the planning of programs of advanced professional education and training in the field of the chronic diseases. For financing such programs, state funds should be made available where there is a demonstrated need to augment contributions of professional societies for professional education. No claims should be made, by agencies of the State, on the services of individuals trained through the use of such funds.

APPENDIXES

APPENDIX A

DEMOGRAPHIC STUDIES

Summary

California's Population and Chronic Disease: In California two major long-term population trends directly affect the magnitude of the chronic disease problem. These trends are: (1) An increasing *number* of persons in the middle and upper age groups; and (2) an increasing *proportion* of older persons in the population. Prior to 1900 there were fewer than 500,000 persons 45 years of age and older; by 1940 this group had grown to over two million. By 1960, it can be estimated that it will amount to a minimum of three and a half million, and it may reach five million. The census of 1870 reported only 12 percent of the population to be 45 and over. By 1900 this group had increased to 22 percent, and by 1940 it had reached 31 percent. Although chronic disease is by no means limited to persons in the older age groups, the prevalence of chronic disease increases sharply with age.

Chronic Disease Mortality in California: During the past several decades in California, there has been a sharp and steady increase in the number of deaths from chronic diseases, and in the crude death rates from these diseases, whereas mortality from communicable diseases has declined.

Seven percent of the people dying of chronic disease in California during 1947 were under 45 years of age, while 32 percent were in the productive middle years of life between 45 and 64. Among all causes of death in California, cardiovascular-renal diseases and cancer occupy first and second place, respectively. Thirty-four percent of all cardiovascular-renal deaths and 50 percent of all cancer deaths in California during 1947 occurred in persons under the age of 65.

Diabetes, rheumatism, and alcoholism—although not as significant as the above two disease groups as causes of death—are important causes of disability in California.

Data From the California Disability Insurange Program: Disability insurance data constitute the only available current information on chronic disease morbidity * in any sizeable segment of the population of California. Approximately two and one-half to three million employed persons are covered under the California Disability Insurance program which offers partial compensation for wage-loss due to illness. Different types of coverage are provided in the program—coverage under either the state plan or coverage under one of a number of voluntary plans. The plans vary to some extent with respect to waiting periods and amount and duration of benefits paid.

During the first year of operation (1947), the California Disability Insurance State Plan paid benefits for 89,160 spells of disability, of which 37,715 (42%) were due to specific chronic diseases. More than 7 million dollars were paid out of the State Disability Fund for a total of 380,000 weeks of chronic illness. Thirty-nine percent of the spells of disability due to chronic diseases occurred in persons under 45 years of age. In 30 percent of the spells of chronic disability, benefits were

* Morbidity refers to incidence, prevalence and duration of illness.

exhausted; that is, the maximum benefits to which the claimants were entitled were paid. It is probable that most of these claimants were still disabled after their insurance benefits were exhausted.

The cardiovascular-renal diseases, cancer and other tumors, rheumatism and arthritis, alcoholism and diabetes accounted for more than one-fourth of the paid spells of disability and nearly one-third of the amount of money paid for all disabilities during 1947.

Estimates of Chronic Illness in the California Population Based on the National Health Survey: In the absence of current morbidity data for the general population of California, National Health Survey (1935-1936) estimates are used here as they have been used in other studies of chronic disease. Although rates based on these estimates are subject to many qualifications, no better sources for such rates have since been developed. Applying National Health Survey rates to the total population of California for 1947, it is estimated that approximately 104,000 persons were disabled for the entire year by chronic illness, and at least 351,000 persons were disabled for periods of from one week to one year. Over two-thirds of these 455,000 persons were under 65 years of age.

On the basis of the National Health Survey it is estimated that in California during 1947 there were 109,000 cases of cardiovascular-renal diseases, 58,000 cases of rheumatism and allied diseases, 29,000 cases of cancer and other tumors, and 9,000 cases of diabetes mellitus. These estimates are minimal and exclude many early or mild cases of chronic illness because they refer only to *disabling* illness—illness causing at least 7 consecutive days of interference with usual occupation. The estimates for cancer and diabetes are particularly low. Other sources indicate that the total number of diagnosed cases of cancer in California during 1947 was probably about 50,000, and the total number of diagnosed cases of diabetes may have been as great as 100,000.

APPENDIX A-1

CALIFORNIA'S POPULATION AND CHRONIC DISEASE

In California two major long-term population trends directly affect the magnitude of the chronic disease problem. These trends are: (1) An increasing *number* of persons in the middle and upper age groups resulting primarily from in-migration to the State; and (2) an increasing *proportion* of older persons in the population resulting largely from progress in control of communicable diseases and in reduction of infant deaths.

Although chronic disease is by no means limited to persons in the older age groups, the prevalence of chronic disease increases sharply with age. In a population in which either the number or the proportion of older persons is increasing, the magnitude of the chronic disease problem is also increasing.

The Number of Older Persons

For over a century California's population has been characterized by continuous and rapid change.[a] The increase in the total population of the State has been of tremendous proportions (Table 1). This has been due primarily to in-migration, and has been far greater than could have occurred from natural increase alone.

Along with the growth of the total population there has been a similar growth in the number of persons in the middle and upper age groups (Table 2). Prior to 1900 there were fewer than 500,000 persons 45 years of age and older; by 1940 this group had grown to over two million. By 1960, it can be estimated that it will amount to a minimum of three and a half million, and it may reach five million.

The Proportion of Older Persons

Until 1940 not only was there a steady increase in the number of older persons in California, but the relative proportion of these persons also showed a continuous rise (Table 3). The census of 1870 reported only 12 percent of the population to be 45 and over. By 1900 this group had increased to 22 percent, and by 1940 it had reached 31 percent. The trend was operative for the country as a whole, and reflected the fact that with progress in medicine and public health, more persons were surviving to the older age groups.

Since the early censuses, California's population has been on the average considerably older than the population of the total United States (Table 4). In 1940 the median age of California's population was higher than that of any other State. The proportion of children in California had been relatively small until 1940. Young adult persons had always made up a large share of the in-migrant population, while elderly persons had also at various times been attracted to the State.

[a] For discussion of changes other than those related to major age trends (i.e. changes in geographic distribution, race, cultural elements, etc.) see Commonwealth Club of California Research Service; *The Population of California*; San Francisco, 1946.

Changes Since 1940

In the years between 1940 and the present, California's population experienced changes even greater than those of previous years. However, since there has been no general population census for the total State since 1940, statistical information on the magnitude of these changes is limited—particularly with reference to age.

Partial information shows that with respect to the proportion of older persons in the population, there has been some reversal in the upward trend that had been operative in California for over half a century (Tables 5 and 6). Although the number of persons in the middle and upper age groups has continued to increase, the relative proportion of such persons was somewhat smaller in 1946 than it had been in 1940. This is probably due to (1) the very heavy in-migration of young adult persons; and (2) the war and postwar "boom" in the birth rate.

It is questionable whether or not the change in trend will continue into the future. For the next several decades it will depend upon the extent to which continued in-migration of young adults and the current reservoir of young children are offset by the aging of the present adult population, by the in-migration of elderly persons, and by the probable drop in the birth rate from recent levels. Regardless of trend in the proportion of older persons, however, it may be expected that the number of such persons will continue to increase.

TABLE 1

GROWTH OF THE TOTAL POPULATION OF CALIFORNIA
1870-1940 AND ESTIMATES 1945-1960

Year	*Population*	*Year*	*Population*
1870	560,247	1945	8,822,688
1880	864,694	1946	9,529,282
1890	1,213,398	1947	9,876,000
1900	1,485,053	1950 Low estimate	9,600,000
1910	2,377,549	High estimate	10,270,000
1920	3,426,861	1960 Low estimate	11,100,000
1930	5,677,251	High estimate	13,500,000
1940	6,907,387		

SOURCE: 1870-1947—United States Department of Commerce; Bureau of the Census.

1950 and 1960—California State Reconstruction and Reemployment Commission.

TABLE 2

GROWTH OF THE POPULATION AGE 45-64 AND 65 AND OVER CALIFORNIA: 1870-1940 AND ESTIMATES 1950 AND 1960

Year	Age 45-64	Age 65 and over
1870	60,977	5,978
1880	133,036	17,025
1890	198,065	40,304
1900	252,861	76,846
1910	422,833	125,263
1920	697,332	200,301
1930	1,187,877	366,125
1940	1,594,566	555,247
1950 Low estimate	2,350,000	870,000
High estimate	2,510,000	930,000
1960 Low estimate	2,890,000	1,180,000
High estimate	3,500,000	1,440,000

Estimates for 1950 and 1960 are based on the Reconstruction and Reemployment Commission estimates of total population. They were made on the assumption that California would experience the same relative increase in the proportion of persons in the above age groups as has been predicted for the United States. The estimates are not intended as precise predictions, but rather as general indications based on available information.

SOURCE: 1870-1940—United States Department of Commerce; Bureau of the Census.

1950 and 1960—California State Reconstruction and Reemployment Commission: P. K. Whelpton, *Forecasts of the Population of the United States 1945-1975.*

TABLE 3

AGE DISTRIBUTION OF THE POPULATION OF CALIFORNIA 1870-1940

Year	Percentage of the population [a] Under 45	45-64	65 and over
1870	88.0	10.9	1.1
1880	82.6	15.4	2.0
1890	80.1	16.5	3.4
1900	77.7	17.1	5.2
1910	76.9	17.8	5.3
1920	73.7	20.4	5.9
1930	72.5	21.0	6.5
1940	68.9	23.1	8.0

[a] Refers to population of known age.
SOURCE: United States Department of Commerce; Bureau of the Census.

TABLE 4

MEDIAN AGE OF THE POPULATION UNITED STATES AND CALIFORNIA 1870-1940

Year	Median age [a] California	United States [b]
1870	25.7	20.2
1880	25.2	20.9
1890	26.6	22.0
1900	28.3	22.9
1910	29.4	24.1
1920	31.2	25.3
1930	31.5	26.5
1940	33.0	29.0

[a] The median age is the age which divides the population into two equal parts—50 percent of the population is younger and 50 percent is older than the median age.
[b] For median age of each state in 1940 see U. S. Department of Commerce; *Statistical Abstract of the U. S. 1947;* Table 25, p. 27.
SOURCE: United States Department of Commerce; Bureau of the Census.

TABLE 5

CALIFORNIA POPULATION OVER AND UNDER VOTING AGE 1940 AND ESTIMATES 1946

	Number of persons		*Percentage of persons*	
Age	*1940*	*1946*	*1940*	*1946*
Under 21	2,021,846	2,893,500	29.3	30.4
21 and over	4,885,541	6,635,782	70.7	69.6
All ages	6,907,387	9,529,282	100.0	100.0

SOURCE: United States Department of Commerce; Bureau of the Census.

TABLE 6

AGE DISTRIBUTION OF URBAN AREAS WHERE SPECIAL CENSUS PROVIDED RECENT AGE DATA[a]—1940, 1946

	Number of persons		*Percentage of persons* [b]	
Age	*1940*	*1946*	*1940*	*1946*
Under 5	185,377	342,142	5.6	7.9
5-9	175,183	249,017	5.2	5.7
10-19	435,588	508,799	13.1	11.7
20-29	584,731	785,217	17.5	18.0
30-44	842,196	1,113,536	25.2	25.6
45-64	819,778	1,017,228	24.6	23.3
65 and over	293,719	341,630	8.8	7.8
All ages	3,336,572	4,357,569	100.0	100.0

[a] The areas are the cities of Alameda, Oakland, Richmond, Burbank, Glendale, Long Beach, Los Angeles, Pasadena, Santa Monica, San Bernardino, San Diego, San Francisco, Stockton, and San Jose; and the unincorporated parts of San Diego County. These areas contained 46 percent of estimated total population of the state in 1946. (They would have contained a considerably larger percentage had the special censuses included suburban areas outside city limits.)

[b] Refers to population of known age.

SOURCE: United States Department of Commerce; Bureau of the Census.

TABLE 7

AVERAGE NUMBER OF YEARS OF LIFE REMAINING AT SPECIFIED AGES WHITE MALE POPULATION OF THE UNITED STATES—1900 AND 1940

	Life expectancy		
	Average years remaining		*Percent increase*
Age	*1900*	*1940*	*1900-1940*
At birth	48.2	62.8	30.3
At age 20	42.2	47.8	13.3
At age 40	27.7	30.0	8.3
At age 60	14.4	15.1	4.9
At age 80	5.1	5.4	5.9

SOURCE: United States Department of Commerce; Bureau of the Census.

TABLE 8

NUMBER AND PERCENT OF PERSONS IN EACH AGE GROUP
CALIFORNIA: 1870-1940

Age	*Number of Persons*							
	1870	*1880*	*1890*	*1900*	*1910*	*1920*	*1930*	*1940*
Under 5	68,277	93,426	106,530	125,937	193,659	275,727	405,367	453,494
5-9	61,526	90,206	111,704	137,005	176,192	280,279	465,394	435,092
10-14	51,785	80,809	111,166	126,889	173,945	259,276	424,126	478,715
15-19	40,043	80,356	111,641	128,084	196,034	243,326	428,684	544,601
20-24	50,014	84,412	123,162	136,549	234,121	274,768	475,127	574,930
25-29	57,376	80,150	120,744	134,269	246,426	307,435	496,029	612,849
30-34	57,972	76,197	107,761	129,103	225,610	306,588	482,664	580,749
35-39	57,893	67,227	89,545	123,122	200,819	310,057	488,620	557,520
40-44	47,700	61,850	79,568	104,214	174,286	262,353	443,499	519,624
45-49	27,482	49,313	63,473	81,939	146,878	232,161	393,547	485,199
50-54	18,020	42,939	55,526	69,530	119,293	194,440	331,479	443,161
55-59	8,627	22,428	40,464	52,504	82,095	149,213	255,289	366,487
60-64	6,848	18,356	38,602	48,888	74,567	121,518	207,562	299,719
65-69	3,118	8,267	20,205	35,206	52,565	82,225	155,746	231,076
70-74	1,757	4,776	11,321	23,192	35,567	57,378	107,564	158,878
75 and over	1,103	3,982	8,778	18,448	37,131	60,698	102,815	165,293
Not reported	706	----	7,940	10,174	8,361	9,419	13,739	----
All ages	560,247	864,694	1,208,130 [a]	1,485,053	2,377,549	3,426,861	5,677,251	6,907,387

Percentage of Persons

Age	*1870*	*1880*	*1890*	*1900*	*1910*	*1920*	*1930*	*1940*
Under 5	12.2	10.8	8.8	8.5	8.1	8.0	7.1	6.6
5-9	11.0	10.4	9.2	9.2	7.4	8.2	8.2	6.3
10-14	9.2	9.3	9.2	8.5	7.3	7.6	7.5	6.9
15-19	7.1	9.3	9.2	8.6	8.2	7.1	7.6	7.9
20-24	8.9	9.8	10.2	9.2	9.8	8.0	8.4	8.3
25-29	10.2	9.3	10.0	9.0	10.4	9.0	8.7	8.9
30-34	10.3	8.8	8.9	8.7	9.5	8.9	8.5	8.4
35-39	10.3	7.8	7.4	8.3	8.4	9.0	8.6	8.1
40-44	8.5	7.2	6.6	7.0	7.3	7.7	7.8	7.5
45-49	4.9	5.7	5.3	5.5	6.2	6.8	6.9	7.0
50-54	3.2	5.0	4.6	4.7	5.0	5.7	5.8	6.4
55-59	1.5	2.6	3.3	3.5	3.5	4.4	4.5	5.3
60-64	1.2	2.1	3.2	3.3	3.1	3.5	3.7	4.3
65-69	0.6	1.0	1.7	2.4	2.2	2.4	2.7	3.3
70-74	0.3	0.6	0.9	1.6	1.5	1.7	1.9	2.3
75 and over	0.2	0.5	0.7	1.2	1.6	1.8	1.8	2.4
Not reported	0.1	--	0.7	0.7	0.4	0.3	0.2	--
All ages	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a] Excludes persons residing on Indian reservations.
SOURCE: United States Department of Commerce; Bureau of the Census.

NOTES AND DETAILED REFERENCES TO SOURCES FOR POPULATION TABLES

TABLE 1 (1) 1870-1940—U.S. Department of Commerce; Bureau of the Census; 16th census of the United States; *Population second series, California Bulletin:* Table 3, p. 9.

(2) 1945-1947—Bureau of the Census releases; *P. 46 No. 3*; *P. 25 No. 8*; *P. 25 No. 4*. Figures given are for total population excluding the armed forces overseas.

(3) 1950 and 1960—California State Reconstruction and Reemployment Commission; *Estimated range for population growth in California to 1960*; tables 3, 5 p. 10, 16.

TABLE 2 (4) 1870-1940—16th census of the United States; *Population, second series, California Bulletin*; table 8, p. 17.

(5) 1950 and 1960—Same as (3) above.

(6) 1950 and 1960—P. K. Whelpton; *Forecasts of the Population of the United States 1945-1975*; U.S. Government Printing Office, Washington, D.C.; 1947; table III p. 81 (table II p. 76). These forecasts were prepared in cooperation with the Bureau of the Census.

TABLE 3 (7) Same as (4) above.

TABLE 4 (8) California—Same as (4) above.

(9) U.S.—16th census of the United States; *Vol. II, Part I*; table 8, p. 26.

TABLE 5 (10) Bureau of the Census release; *P. 25, No. 8*. Estimates are as of July 1, 1946.

TABLE 6 (11) Bureau of the Census releases.

Alameda	P-SC, No. 102	San Bernardino	P-SC, No. 173
Oakland	P-SC, No. 129	San Diego	P-SC, No. 172
Richmond	P-28, No. 280	San Francisco	P-SC, No. 135
Burbank	P-28, No. 248	Stockton	P-28, No. 304
Glendale	P-SC, No. 176	San Jose	P-SC, No. 204
Long Beach	P-SC, No. 169	San Diego	
Los Angeles	P-SC, No. 186	County (unincorporated parts)	P-SC, No. 174
Pasadena	P-SC, No. 177		
Santa Monica	P-SC, No. 175		

(12) The special census were taken at various different dates between May 1945 and January 1948. The majority, however, were taken in 1946, and the average date of the censuses was April 1946.

TABLE 7 (13) U.S. Department of Commerce; Bureau of the Census; 16th census of the U.S.; *U.S. life tables and actuarial tables 1939-1941*; table J, p. 10, 11.

TABLE 8 (14) Same as (4) above.

APPENDIX A-2

CHRONIC DISEASE MORTALITY IN CALIFORNIA [a]

During the past several decades in California, there has been a sharp and steady increase in the number of deaths from chronic diseases, and in the crude death rates from these diseases. This trend in chronic disease mortality has focused attention on changing medical and health problems deriving from a growing and an aging population, and from progress in medicine and public health.

With the great increase in total population in California there has been great increase in the number of persons dying of chronic disease.[b] Until 1940 the proportion of older persons in the population was rising and the crude death rates for the chronic diseases also were rising. After 1940, when war and postwar changes resulted in a smaller proportion of older persons and a larger proportion of children and young adults, there was a decrease in the crude death rates for these diseases. Mortality from communicable diseases in California has declined steadily. The trends [c] have been as follows (Tables 1-3):

	Number of deaths		*Percentage of all deaths*		*Crude death rate per 100,000 population*	
	Selected chronic diseases [d]	*Selected communicable diseases* [d]	*Selected chronic diseases*	*Selected communicable diseases*	*Selected chronic diseases*	*Selected communicable diseases*
1910	13,187	9,810	40.7	30.3	554.6	412.6
1920	20,934	14,199	44.4	30.1	610.9	414.3
1930	36,372	12,341	54.9	18.6	640.7	217.4
1940	52,610	8,700	65.5	10.8	761.6	126.0
1945	62,290	8,677	66.8	9.3	706.0	98.3
1947	66,518	7,875	68.6	8.1	673.5	79.7

Although chronic disease mortality increases with age, it is by no means limited to persons in the older age groups (Table 4). Seven percent of the people dying of chronic disease in California during 1947 were under 45 years of age, while 32 percent were in the productive middle years of life between 45 and 64.

Age is not the only factor affecting chronic disease mortality. Each of the specific chronic diseases has its own mortality trend. As shown by recorded mortality statistics, the trends are affected not only by population characteristics such as age, sex and race, but also by factors associated with the original recording of information on death certificates,

[a] Grateful acknowledgment is made to the National Office of Vital Statistics, Washington, D. C., for the provision of unpublished data used in this report.

[b] "Chronic disease" is used here to refer to the specific diseases selected by the Chronic Disease Advisory Committee which could be traced on a trend basis.

[c] Trends are shown beginning with 1910 which is the first census year for which systematic mortality data are available for California.

[d] For the list of selected chronic and communicable diseases see Table 1.

and the statistical processing of death certificates. These factors include changing use of terms by the medical profession and statistical selection of the primary cause of death when more than one cause is recorded. An additional factor since 1940 is the use of population estimates rather than actual population counts as bases for rates for years in which great population changes were occurring.

CANCER

In California cancer has advanced from sixth among the leading causes of death in 1910, to second place in 1947. As a cause of death, cancer is today exceeded only by the cardiovascular-renal diseases. The trend of cancer mortality in California is summarized by the following statistics (Tables 1-3):

	Number of deaths	*Percentage of all deaths*	*Crude death rate per 100,000 population*	*Age-adjusted rate per 100,000 population*[a]
1910	2,013	6.2	84.7	113.2
1920	3,800	8.0	110.9	134.7
1930	7,170	10.8	126.3	146.5
1940	10,128	12.6	146.6	146.6
1947	13,681	14.1	138.5	[b]

Examination of the age-adjusted rate shows that in California apart from the aging of the population there was no increase in cancer mortality as a whole between 1930 and 1940. Between 1910 and 1930, however, the age-adjusted rate rose though not nearly to the same extent as the crude death rate. It would be expected that for this period improvement in diagnosis and in certification of cause of death would be important factors though their extent and effect cannot be measured.

Although aging of the population accounts for much of the increase in the number of deaths from cancer, cancer mortality is not limited to aged persons. The cancer death rate increases with age, but there is a substantial amount of cancer mortality among younger and middle aged persons (Table 4). Of all persons dying of cancer in California in 1947, 10 percent were under 45, and 40 percent were between 45 and 64—and only 50 percent were 65 years of age or older.

For different sites of cancer separately for men and women, the trend of cancer mortality has varied greatly. Epidemiological studies of mortality in other states [c] indicate that for women age-adjusted mortality has been decreasing in recent years, while for men it has been increasing with a particularly sharp rise in cancer of the respiratory system.

Because they were not separately classified until recently, certain of the important sites of cancer cannot be traced on a trend basis. For 1947, however, the number of deaths in California attributed to the different sites of cancer is shown in attached Table 5.

---

[a] Adjusted to the age distribution of the California population in 1940—the age-adjusted death rate is the rate that would have applied if the proporion of persons in the various age groups had been the same in 1910, 1920 and 1930 as it was in 1940.

[b] Although it is known that on the average California's population was considerably younger in 1947 than it had been in 1940, sufficiently detailed age data are not available for the computation of 1947 age-adjusted death rates.

[c] M. L. Levin; *The Epidemiology of Cancer;* American Journal of Public Health; Volume 34, No. 6, pp. 611-620.

CARDIOVASCULAR-RENAL DISEASES

Between 1910 and the present, changing diagnostic concepts of the medical profession, and changing practice in statistical assignment of the primary cause of death resulted in shifting of terms within the total group of cardiovascular-renal diseases. Part of the deaths which in 1910 or 1920 would have been attributed to intracranial lesions of vascular origin (cerebral hemorrhage and apoplexy), or to nephritis, are today assigned to heart disease or to other diseases of the circulatory system. For this reason the trend of these diseases will be considered as a whole. The trend in California has been as follows (Tables 1-3):

	Number of deaths	*Percentage of all deaths*	*Crude death rate per 100,000 population*	*Age-adjusted rate per 100,000 population*
1910	9,064	28.0	381.2	523.4
1920	14,999	31.8	437.7	549.1
1930	25,608	38.6	451.1	542.9
1940	37,651	46.9	545.1	545.1
1947	46,970	48.4	475.6	--

It will be noted that between 1910 and 1947 the number of deaths from cardiovascular-renal diseases increased from under 10,000 to almost 50,000. By 1947 these diseases accounted for approximately half of all deaths. Most of this increase, however, is attributable to aging of the population. The age-adjusted death rate increased between 1910 and 1920, but between 1920 and 1940 it remained practically stationary (it actually decreased, but the decrease was not of significant size).

As with other chronic diseases, the death rate for cardiovascular-renal diseases increases with age. However, a considerable proportion of people dying of these diseases are in the younger or middle age groups (Table 4). In 1947, 5 percent of those dying of cardiovascular-renal diseases in California were under 45, and 29 percent were between 45 and 64.

Cardiovascular-renal diseases as a whole are a very broad group and comprise many different specific diseases. Although it is not possible to trace the mortality trend for these specific diseases, an approximation can be made by considering the trend of mortality in California at different ages (Table 6).

The age-specific death rates show that for persons under 45 years of age the death rate from cardiovascular-renal diseases has been decreasing. It is at these ages that the effects of infectious processes on the heart and kidneys are evident. For persons between 45 and 74 the death rate from these diseases has remained relatively constant, while for those 75 and older it has actually been increasing. At these ages the arteriosclerotic and other cardiovascular-renal diseases are prominent.

Although not available on a trend basis, for 1947 the number of deaths in California attributed to different forms of cardiovascular-renal disease are shown in Table 7.

DIABETES MELLITUS

The statistics for the trend of diabetes mortality in California are summarized as follows (Tables 1-3):

	Number of deaths	*Percentage of all deaths*	*Crude death rate per 100,000 population*	*Age-adjusted rate per 100,000 population*
1910	378	1.2	15.9	20.7
1920	596	1.3	17.4	21.0
1930	1,016	1.5	17.9	20.9
1940	1,708	2.1	24.7	24.7
1947	2,027	2.1	20.5	--

Diabetes, a more specific disease category than cancer or the cardiovascular-renal diseases, accounts for a much smaller number of deaths. It will be noted that the age-adjusted death rate for diabetes has not been decreasing but actually showed some increase between 1930 and 1940. This seems paradoxical in view of the greatly improved method of treatment following the discovery of insulin. However, treatment of diabetes does not cure the disease and it is probable that its effect has been to postpone death. It has also been postulated[a] that there has been an additional increase in the prevalence of diabetes attributable to the increased food intake and lessened output of physical energy characteristic of modern American life.

ALCOHOLISM

Although very important as a social problem and as a cause of illness and disability, alcoholism is not significant as a direct cause of death. In recent years alcoholism alone has appeared less frequently on death certificates, and when it has appeared in combination with other causes of death, it has rarely been selected as the primary cause. Death certificates showing cirrhosis of the liver frequently fail to specify whether or not the disease is associated with alcoholism. For these reasons the mortality data for alcoholism are limited. When, because of lack of other information they must be used, they should be used in conjunction with other information. This has been done for the California data and will be presented in a separate report.

[a] New York State Health Preparedness Commission; *A Program for Care of the Chronically Ill;* Legislative Document No. 69 (1947).

RHEUMATISM

Rheumatism, like alcoholism, is important from the standpoint of morbidity but not of mortality. As a primary cause of death it accounted for only 88 deaths in 1947 (Table 1). It can be estimated,[a] however, that during 1947 in about 1,200 deaths rheumatism was mentioned on the death certificate though it was not selected as the primary cause of death. However, even this is a very small number when compared with the estimated 48,000 cases of rheumatism causing at least one week of disability in 1947 (see report on morbidity estimates based on the National Health Survey).

* * * * * * *

The general trends of mortality in California for chronic diseases as a whole, and for the main groups of chronic diseases have been described. It has been shown that with the growth of the population and the aging of the population more people in California have been dying of chronic diseases.

Many diseases such as rheumatism have a high rate of prevalence and cause considerable disability, but only occasionally result in death. In the case of cancer, certain forms of the disease such as skin or breast cancer are much less likely to be fatal than other forms such as digestive or respiratory cancer. Because they are available mortality records are often used as indices of morbidity and as the sole indication of the magnitude of the problem of chronic disease. However, mortality data are not adequate for this purpose. There is need for systematic collection of statistical information on illness and disability, as well as on deaths.

[a] Based on a special tabulation of second and third causes of death for a one-month (January, 1947) sample of death certificates.

TABLE 1

NUMBER OF DEATHS
SELECTED CHRONIC DISEASES AND SELECTED COMMUNICABLE DISEASES
CALIFORNIA: 1910-1947
(By Place of Occurrence)

	Number of deaths								
	1910	*1915*	*1920*	*1925*	*1930*	*1935*	*1940*	*1945*	*1947*
Cancer—Total [a]	2,013	2,795	3,800	5,292	7,170	8,369	10,128	12,307	13,681
Buccal cavity and pharynx	92	112	148	224	279	311	311	382	376
Digestive organs and peritoneum	1,070	1,565	2,006	2,731	3,462	3,908	4,404	5,231	5,741
Female genital organs	281	369	525	762	1,017	1,167	1,356	1,424	1,685
Uterus [b]	–	330	481	667	845	925	1,006	1,039	1,180
Breast	170	257	370	529	750	861	1,126	1,389	1,391
Skin	63	97	116	101	165	194	191	201	255
Other and unspecified sites	337	395	635	945	1,497	1,928	2,740	3,580	4,233
Respiratory system [b]	–	–	–	–	296	447	691	1,063	1,368
Benign tumors and tumors of unspecified nature	89	99	114	196	328	375	344	346	389
Cardiovascular-renal diseases—Total	9,064	12,393	14,999	19,792	25,608	31,244	37,651	44,444	46,970
Intracranial lesions of vascular origin	2,033	2,682	3,647	4,147	4,980	5,137	6,128	7,413	7,652
Diseases of the heart—all forms	4,283	5,737	7,055	10,317	14,794	19,691	24,618	29,892	32,535
Other diseases of the circulatory system	653	922	1,016	1,238	1,263	1,721	2,223	2,944	2,880
Nephritis (including arteriosclerotic kidney)	2,095	3,052	3,281	4,090	4,571	4,695	4,682	4,195	3,903
Diabetes mellitus	378	518	596	775	1,016	1,464	1,708	1,935	2,027
Rheumatism and arthritis	34	38	42	61	66	78	67	104	88
Alcoholism	208	183	35	122	187	214	165	204	191
Cirrhosis of the liver	442	428	331	425	614	939	1,278	1,511	1,801

Anemias	103	169	261	334	203	149	137	146	133
Diseases of the organs of vision	-	3	5	2	2	2	1	5	3
Diseases of the ear and mastoid process	31	50	64	130	227	223	110	47	34
Ulcer of the stomach or duodenum	123	181	174	437	466	676	664	762	825
Diseases of the female genital organs and breast [c]	106	92	114	133	186	135	101	98	61
Diseases of the bones, joints and organs of movement	45	67	102	47	72	94	52	38	36
Senility	551	436	297	371	227	157	204	343	279
Tuberculosis	4,910	5,586	5,555	5,934	5,657	4,496	3,887	3,840	3,449
Pneumonia and influenza	2,465	3,011	5,725	4,368	4,762	4,658	4,068	4,007	3,660
Diarrhea and enteritis	1,224	1,120	1,570	1,482	1,053	550	499	568	623
Specific acute communicable diseases [d]	1,211	943	1,349	976	869	413	246	262	143
Total selected chronic diseases [e]	13,187	17,452	20,934	28,117	36,372	44,119	52,610	62,290	66,518
Total selected communicable diseases	9,810	10,660	14,199	12,760	12,341	10,117	8,700	8,677	7,875
Total deaths from all causes	32,401	39,038	47,196	56,800	66,249	72,456	80,270	93,176	96,968

[a] Excluding leukemias and Hodgkins disease.
[b] Not separately classified for earlier years.
[c] Excluding venereal, puerperal and tumors.
[d] Typhoid fever, scarlet fever, whooping cough, diphtheria, measles.
[e] Diseases selected by the Chronic Disease Advisory Committee for which mortality data were available on a trend basis.

SOURCE: State of Calif., Department of Public Health, Vital Statistics Records.
U. S. Public Health Service, National Office of Vital Statistics.

TABLE 2

PERCENTAGES OF ALL DEATHS
SELECTED CHRONIC DISEASES AND SELECTED COMMUNICABLE DISEASES
CALIFORNIA: 1910-1947
(By Place of Occurrence)

	Percentage of all deaths								
	1910	*1915*	*1920*	*1925*	*1930*	*1935*	*1940*	*1945*	*1947*
Cancer—Total [a]	6.2	7.2	8.0	9.3	10.8	11.6	12.6	13.2	14.1
Buccal cavity and pharynx	.3	.3	.3	.4	.4	.4	.4	.4	.4
Digestive organs and peritoneum	3.3	4.0	4.3	4.8	5.2	5.4	5.5	5.7	5.9
Female genital organs	.9	.9	1.1	1.3	1.5	1.6	1.7	1.5	1.7
Uterus [b]	–	.8	1.0	1.2	1.3	1.3	1.2	1.1	1.2
Breast	.5	.7	.8	.9	1.1	1.2	1.4	1.5	1.4
Skin	.2	.3	.2	.2	.3	.3	.2	.2	.3
Other and unspecified sites	1.0	1.0	1.3	1.7	2.3	2.7	3.4	3.9	4.4
Respiratory system [b]	–	–	–	–	.4	.6	.9	1.1	1.4
Benign tumors and tumors of unspecified nature	.3	.2	.2	.3	.5	.5	.4	.4	.4
Cardiovascular-renal diseases—total	28.0	31.7	31.8	34.8	38.6	43.1	46.9	47.7	48.4
Intracranial lesions of vascular origin	6.3	6.9	7.7	7.3	7.5	7.1	7.6	7.9	7.9
Diseases of the heart—all forms	13.2	14.7	14.9	18.1	22.3	27.2	30.7	32.1	33.5
Other diseases of the circulatory system	2.0	2.3	2.2	2.2	1.9	2.3	2.8	3.2	3.0
Nephritis (including arteriosclerotic kidney)	6.5	7.8	7.0	7.2	6.9	6.5	5.8	4.5	4.0
Diabetes mellitus	1.2	1.3	1.3	1.4	1.5	2.0	2.1	2.1	2.1
Rheumatism and arthritis	.1	.1	.1	.1	.1	.1	.1	.1	.1
Alcoholism	.6	.5	.1	.2	.3	.3	.2	.2	.2
Cirrhosis of the liver	1.4	1.1	.7	.7	.9	1.3	1.6	1.6	1.8
Anemias	.3	.4	.6	.6	.3	.2	.2	.2	.1
Diseases of the organs of vision	–	*	*	*	*	*	*	*	*
Diseases of the ear and mastoid process	.1	.1	.1	.2	.3	.3	.1	*	*
Ulcer of the stomach or duodenum	.4	.5	.4	.8	.7	.9	.8	.8	.8
Diseases of the female genital organs and breast [c]	.3	.2	.2	.2	.3	.2	.1	.1	.1
Diseases of the bones, joints and organs of movement	.1	.2	.2	.1	.1	.1	.1	*	*
Senility	1.7	1.1	.6	.6	.3	.2	.2	.4	.3
Tuberculosis	15.2	14.3	11.8	10.5	8.5	6.2	4.8	4.1	3.6

Pneumonia and influenza	7.6	7.7	12.1	7.7	7.2	6.4	5.1	4.3	3.8
Diarrhea and enteritis	3.8	2.9	3.3	2.6	1.6	.8	.6	.6	.6
Specific acute communicable diseases [d]	3.7	2.4	2.9	1.7	1.3	.6	.3	.3	.1
Total selected chronic diseases [e]	40.7	44.7	44.4	49.5	54.9	60.9	65.5	66.8	68.6
Total selected communicable diseases	30.3	27.3	30.1	22.5	18.6	14.0	10.8	9.3	8.1
Total deaths from all causes	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

* Less than 1 percent.
[a] Excluding leukemias and Hodgkins disease.
[b] Not separately classified for earlier years.
[c] Excluding venereal, puerperal and tumors.
[d] Typhoid fever, scarlet fever, whooping cough, diphtheria, measles.
[e] Diseases selected by the Chronic Disease Advisory Committee for which mortality data were available on a trend basis.

SOURCE: State of California, Department of Public Health, Vital Statistics Records.
United States Public Health Service, National Office of Vital Statistics.

TABLE 3

CRUDE DEATH RATES
SELECTED CHRONIC DISEASES AND SELECTED COMMUNICABLE DISEASES
CALIFORNIA: 1910-1947

(By Place of Occurrence)

	Crude death rate per 100,000 population								
	1910	*1915*	*1920*	*1925*	*1930*	*1935*	*1940*	*1945*	*1947*
Cancer—Total [a]	84.7	92.9	110.9	111.9	126.3	135.7	146.6	139.5	138.5
Buccal cavity and pharynx	*	3.7	4.3	4.7	4.9	5.0	4.5	4.3	3.8
Digestive organs and peritoneum	45.0	52.0	58.6	57.8	61.0	63.4	63.7	60.4	58.1
Female genital organs	11.8	12.3	15.3	16.1	17.9	18.9	19.6	16.1	17.1
Uterus [b]	-	11.0	14.0	14.1	14.9	15.0	14.6	11.8	11.9
Breast	7.2	8.5	10.8	11.2	13.2	14.0	16.3	15.8	14.1
Skin	*	*	3.4	2.1	2.9	3.1	2.8	2.3	2.6
Other and unspecified sites	14.2	13.1	18.5	20.0	26.4	31.3	39.7	40.6	42.8
Respiratory system [b]	-	-	-	-	5.2	7.2	10.0	12.0	13.8
Benign tumors and tumors of unspecified nature	*	*	3.3	4.1	5.8	6.1	5.0	3.9	3.9
Cardiovascular-renal diseases—total	381.2	412.0	437.7	418.4	451.1	506.5	545.1	503.7	475.6
Intracranial lesions of vascular origin	85.5	89.2	106.4	87.7	87.7	83.3	88.7	84.0	77.5
Diseases of the heart—all forms	180.1	190.7	205.9	218.1	260.6	319.2	356.4	338.8	329.4
Other diseases of the circulatory system	27.5	30.6	29.7	26.2	22.3	27.9	32.2	33.4	29.2
Nephritis (including arteriosclerotic kidney)	88.1	101.5	95.7	86.4	80.5	76.1	67.8	47.5	39.5
Diabetes mellitus	15.9	17.2	17.4	16.4	17.9	23.7	24.7	21.9	20.5
Rheumatism and arthritis	*	*	*	*	*	*	*	1.2	*
Alcoholism	8.7	6.1	*	2.6	3.3	3.5	2.4	2.3	1.9
Cirrhosis of the liver	18.6	14.2	9.6	9.0	10.8	15.2	18.5	17.1	18.2

Anemias	4.3	5.6	7.6	7.1	3.6	2.4	2.0	1.6	1.3
Diseases of the organs of vision	–	*	*	*	*	*	*	*	*
Diseases of the ear and mastoid process	*	*	*	2.7	4.0	3.6	1.6	*	*
Ulcer of the stomach or duodenum	5.2	6.0	5.1	9.2	8.2	11.0	9.6	8.6	8.4
Diseases of the female genital organs and breast [c]	4.4	*	3.3	2.8	3.3	2.2	1.5	*	*
Diseases of the bones, joints and organs of movement	*	*	3.0	*	*	*	*	*	*
Senility	23.2	14.5	8.7	7.8	4.0	2.5	3.0	3.9	2.8
Tuberculosis	206.5	185.7	162.1	125.5	99.6	72.9	56.3	43.5	34.9
Pneumonia and influenza	103.7	100.1	167.0	92.4	83.9	75.5	58.9	45.4	37.1
Diarrhea and enteritis	51.5	37.2	45.8	31.3	18.6	8.9	7.2	6.4	6.3
Specific acute communicable diseases [d]	50.9	31.4	39.4	20.6	15.3	6.7	3.6	3.0	1.4
Total selected chronic diseases [e]	554.6	580.2	610.9	594.4	640.7	715.2	761.6	706.0	673.5
Total selected communicable diseases	412.6	354.4	414.3	269.8	217.4	164.0	126.0	98.3	79.7
Total deaths from all causes	1362.8	1297.8	1377.2	1200.8	1166.9	1174.7	1162.1	1056.1	981.8

* Rates not computed for less than 100 deaths.
[a] Excluding leukemias and Hodgkins disease.
[b] Not separately classified for earlier years.
[c] Excluding venereal, puerperal and tumors.
[d] Typhoid fever, scarlet fever, whooping cough, diphtheria, measles.
[e] Diseases selected by the Chronic Disease Advisory Committee for which mortality data were available on a trend basis.

SOURCE: State of Calif., Department of Public Health, Vital Statistics Records.
U. S. Public Health Service, National Office of Vital Statistics.

TABLE 4

AGE DISTRIBUTION OF DEATHS
SELECTED CHRONIC DISEASES AND SELECTED COMMUNICABLE DISEASES
CALIFORNIA: 1947
(By Place of Occurrence)

	Number of deaths			*Percent of deaths*		
	Under 45	*45-64*	*65 and over*	*Under 45*	*45-64*	*65 and over*
Cancer—total [a]	1,320	5,473	6,888	9.6	40.0	50.4
Buccal cavity and pharynx	31	157	188	8.2	41.8	50.0
Digestive organs and peritoneum	327	2,085	3,329	5.7	36.3	58.0
Female genital organs	248	850	587	14.7	50.5	34.8
Uterus	185	568	427	15.7	48.1	36.2
Breast	181	639	571	13.0	45.9	41.1
Skin	41	58	156	16.1	22.7	61.2
Other and unspecified sites	492	1,684	2,057	11.6	39.8	48.6
Respiratory System	102	734	532	7.4	53.7	38.9
Benign tumors and tumors of unspecified nature	142	168	79	36.5	43.2	20.3
Cardiovascular-renal diseases—Total	2,331	13,700	30,939	4.9	29.2	65.9
Intracranial lesions of vascular origin	263	1,890	5,499	3.4	24.7	71.9
Diseases of the heart—all forms	1,562	10,212	20,761	4.8	31.4	63.8
Other diseases of the circulatory system	111	431	2,338	3.8	15.0	81.2
Nephritis (including arteriosclerotic kidney)	395	1,167	2,341	10.1	29.9	60.0
Diabetes mellitus	121	689	1,217	6.0	34.0	60.0
Rheumatism and arthritis	7	16	65	7.9	18.2	73.9
Alcoholism	71	93	27	37.2	48.7	14.1
Cirrhosis of the liver	395	943	463	21.9	52.4	25.7

Anemias	21	21	91	15.8	15.8	68.4
Diseases of the organs of vision	2	*	1	66.7	*	33.3
Diseases of the ear and mastoid process	24	4	6	70.6	11.8	17.6
Ulcer of the stomach or duodenum	96	393	336	77.6	47.7	40.7
Diseases of the female genital organs and breast [b]	30	24	7	49.2	39.3	11.5
Diseases of the bones, joints and organs of movement	14	8	14	38.9	22.2	38.9
Senility	*	2	277	*	.7	99.3
Tuberculosis	1,538	1,290	621	44.6	37.4	18.0
Pneumonia and influenza	1,228	743	1,689	33.6	20.3	46.1
Diarrhea and enteritis	559	31	33	89.7	5.0	5.3
Specific acute communicable diseases [c]	125	11	7	87.4	7.7	4.9
Total selected chronic diseases [d]	4,574	21,534	40,410	6.9	32.4	60.7
Total selected communicable diseases	3,450	2,075	2,350	43.8	26.4	29.8
Total deaths from all causes	20,785	28,460	47,723	21.4	29.4	49.2

* Refers to no deaths.
[a] Excluding leukemias and Hodgkins disease.
[b] Excluding venereal, puerperal and tumors.
[c] Typhoid fever, scarlet fever, whooping cough, diphtheria, measles.
[d] Diseases selected by the Chronic Disease Advisory Committee for which mortality data were available on a trend basis.
SOURCE: State of Calif., Department of Public Health, Vital Statistics Records.

TABLE 5

CANCER DEATHS BY SITE
CALIFORNIA 1947

(By Place of Occurrence)

Cause of Death	*Number of Deaths*
Buccal cavity and pharynx	376
Digestive organs and peritoneum	5,741
Stomach	1,816
Rectum and anus	772
Intestines (except duodenum and rectum)	1,456
Liver and biliary passages	683
Pancreas	607
Other and unspecified	407
Respiratory system	1,368
Bronchus	558
Lung	616
Other and unspecified	194
Uterus	1,180
Cervix	620
Other and unspecified	560
Other female genital organs	505
Ovary	453
Other and unspecified	52
Breast	1,391
Male genital organs	833
Prostate	782
Other and unspecified	51
Urinary organs	749
Kidney	253
Bladder	480
Other and unspecified	16
Skin (except vulva and scrotum)	255
Brain and other parts of the central nervous system	315
Leukemias and aleukemias [a]	595
Hodgkins disease [a]	138
Other and unspecified sites	968
Total [b]	14,414

[a] Not included in other tables because mortality data not available on a trend basis.
[b] Total is greater than shown in other tables because of the inclusion of the additional categories.
SOURCE: State of California, Department of Public Health, Vital Statistics Records.

TABLE 6

TREND OF MORTALITY FROM CARDIOVASCULAR-RENAL DISEASES[a] FOR THREE MAJOR GROUPS—CALIFORNIA: 1910-1940

(By Place of Occurrence)

	Death rate per 100,000 population		
	Under 45	*45-74*	*75 and over*
1910	81.0	1,010.8	6,443.6
1920	68.2	1,008.3	7,911.0
1930	50.7	1,041.7	8,118.2
1940	42.5	1,101.2	8,332.5

[a] Includes disease groups as shown in Tables 1-4.
SOURCE: United States Public Health Service, National Office of Vital Statistics.

TABLE 7

DEATHS FROM CARDIOVASCULAR-RENAL DISEASE CALIFORNIA: 1947

(By Place of Occurrence)

Cause of death	*Number of deaths*
Intracranial lesions of vascular origin	7,652
Rheumatic heart disease	1,727
Chronic rheumatic diseases of the heart	1,706
Acute rheumatic fever with heart involvement[a]	21
Heart disease (except rheumatic)	30,829
Diseases of the coronary arteries and angina pectoris	11,578
Other diseases of the heart	19,251
Diseases of the circulatory system (other than heart disease)	2,880
Arteriosclerosis	2,131
Other diseases of the circulatory system	749
Nephritis	3,903
Arteriosclerotic kidney	2,912
Other and unspecified nephritis	991
Multiple sclerosis[a]	70
Total[b]	47,061

[a] Not included in other tables because mortality data not available on a trend basis.
[b] Total is greater than shown in other tables because of the inclusion of the additional categories.
SOURCE: State of California, Department of Public Health, Vital Statistics Records.

NOTES AND REFERENCES FOR TABLES ON MORTALITY

Table 1

(1) U. S. Bureau of the Census, *Mortality Statistics, 1910*, Table 8, pp. 367-370.
(2) *Ibid. 1915*, Table 8, pp. 448-451.
(3) *Ibid. 1920*, Table 8, pp. 314-316.
(4) *Ibid. 1925*, Part 1, Table 8, pp. 145-148.
(5) *Ibid. 1930*, Table 8, pp. 286-291.
(6) *Ibid. 1935*, Table 9, p. 258.
(7) U. S. National Office of Vital Statistics, Unpublished tabulations, 1910, 1915, 1920, 1925, 1930, 1935.
(8) U. S. Bureau of the Census, *Vital Statistics of the United States, 1940*, Part 1, Table 13, pp. 277-279.
(9) State of California, Department of Public Health, Vital Statistics Records, 1945, 1947.

Table 2 (10) Same as (1)-(9) above.

Table 3 (11) Same as (1)-(9) above.
(12) Population bases for rates—Appendix A—1, Table 1.
(13) Population bases for rates—U. S. Bureau of the Census, *Vital Statistics Rates in the United States, 1900-1940*, Table 1, pp. 840-841, 857.

Table 4 (14) State of California, Department of Public Health, Vital Statistics Records, 1947.

Table 5 (15) Same as (14) above.

Table 6 (16) Same as (1), (3), (5), (7), (8) above.
(17) Population bases for rates—Appendix A—1, Table 8.

Table 7 (18) Same as (14) above.

Text tables of age—adjusted death rates
(19) Same as (16) above.
(20) U. S. National Office of Vital Statistics, unpublished tabulations, 1940.
(21) Standard population—U. S. Bureau of the Census, *Vital Statistics Rates in the United States, 1900-1940*, Table 11, p. 877. The following age groups were used—under 1, 1-4, 5-14, 15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75-84, 85 and over; exception to this grouping was made in the case of cancer for 1910 and 1920 since comparable mortality data were not available—for these years the age groups used were—under 1, 1-4, 5-9, 10-19, 20-29, 30-39, 40-49, 50-59, 60-69, 70-79, 80 and over—and the sources for the standard populations were—Appendix A—1, Table 8, and 15th census of the United States, 1930, *Population Vol. 11*, Table 24, p. 658.
(22) Bases for age—specific rates used in computing age-adjusted rates—same as (21) above; also, 13th census of the United States, 1910, *Abstract of the Census, Supplement for California*, Table 7, p. 588, and 14th census of the United States, 1920, *Population Vol. 11*, Table 13, p. 194.

APPENDIX A-3

MORBIDITY DATA FROM THE CALIFORNIA DISABILITY INSURANCE PROGRAM

Operating programs are one of the few sources from which morbidity data can be obtained for diseases other than those made reportable by law. Each operating program, whether it offers medical care, disability insurance or other types of benefits, differs in the kind, amount and extent of benefits, in the size and composition of the covered population and in the administration of the programs. These differences, and the fact that the programs are not designed primarily as statistical services, introduce certain limitations in the use to which the data can be put and in the comparisons which can be made between the data from any two programs.

I. GENERAL PROVISIONS OF THE DISABILITY INSURANCE PROGRAM

Purpose of Disability Insurance

In 1946 the California Legislature amended the California Unemployment Insurance Act to provide cash benefits for wage loss resulting from illness or injury. Benefits under this system are not paid as reimbursement for medical care expenditures.

Coverage

The exact number of persons in covered employment is not known at the present time, but it has been estimated at between two and one-half and three million. Certain classes of employment are not covered by the act. The principal excluded groups are agricultural labor, domestics, self-employed persons and government employees.

Two Types of Disability Insurance

Two types of coverage are provided by the disability insurance system—the state and voluntary plans; these two forms are described in Sections II and III. At the end of 1947, there were some 8,750 voluntary plans covering an estimated 678,000 persons.

II. THE STATE PLAN

Eligibility Requirements

In order to receive disability insurance benefits, a person must:

1. Be unemployed because of illness or injury;
2. Serve a seven-day waiting period;
3. File a claim accompanied by a medical statement which includes history, findings and diagnosis. This statement must be signed by a medical doctor, osteopath, chiropodist, chiropractor, dentist, medical officer in a federal medical facility, or by an accredited religious practitioner. During 1947, 88 percent of the more than 100,000 claims received under the state plan were signed by doctors of medicine, 9 percent by doctors of osteopathy and the remaining 3 percent by doctors

of chiropractic.[a] (Fewer than one-half of one per cent were certified to by religious practitioners);

4. Have earned a specified amount of money in covered employment during a period preceding the disability. This eligibility requirement tends to exclude from coverage many persons in the under eighteen age group since few persons in this group have earned sufficient wages to meet this requirement;

5. Submit to a reasonable physical examination when and if required.

Amount and Duration of Benefits

Until January 1, 1948, the amount of benefits paid ranged from $10 to $20 per week for a maximum of 23.4 weeks. Payments were made for only full weeks of disability beyond the seven-day waiting period. (Effective January 1, 1948, the maximum weekly benefit was increased to $25 and the maximum duration to 26 weeks. Payments are made for each day of disability beyond the seven-day waiting period.)

Claimants may receive disability insurance and unemployment insurance at different times during the same benefit year,[b] but not during the same week. If both types of insurance are received during the same benefit year, payments are limited to one and one-half times the amount payable for either form of insurance. For this reason, unemployment insurance payments may reduce the amount and duration of disability insurance payments.

Disqualifications

A claimant is not eligible during any week in which he is entitled to receive unemployment insurance, workmen's compensation, regular wages paid by the employer or GI readjustment allowances. A claimant who is disqualified from receiving unemployment insurance for quitting his job without good cause, leaving his job on account of a trade dispute or for refusing suitable work is also disqualified for disability insurance.

III. VOLUNTARY PLANS

Eligibility Requirements

Eligibility requirements are essentially the same as under the state plan with the exception that not all voluntary plans require a waiting period. Earning and duration of employment requirements may differ from the state plan and even may differ among the voluntary plans.

Amount and Duration of Benefits

Voluntary plan weekly benefit payments are at least equal in amount to those paid under the state plan, and some offer as much as full salary.

Disqualifications

A claimant is disqualified for the same reasons as stated under Section II.

---

[a] Excludes 942 claims certified to by government medical officers, chiropodists and dentists during the fourth quarter of 1947. Certification by these practitioners was not accepted before September 19, 1947.

[b] The 12-month period following the filing of the first valid unemployment or disability insurance claim.

IV. MORBIDITY DATA—STATE AND VOLUNTARY PLANS

Coding of Diagnosis

The U. S. P. H. S. coding manual [a] is used in coding the diagnosis reported on the claim form. When two or more diagnoses are reported on the same claim form, the disease which is keeping the claimant off his job is selected for coding. When it is not clear which one is keeping the claimant off the job, preference is given to the chronic diseases, such as malignant neoplasms, heart and circulatory diseases and diabetes.

Data Based on Spells Paid and Reported Terminated

Morbidity reports are based on those spells of disability which were paid and reported terminated by the district offices of the Department of Employment. Therefore, many spells of disability which began late in 1947 would not necessarily be reported terminated until 1948.

Weeks Paid

This is the total number of full weeks for which compensation was received. The partial weeks of disability which were compensated under voluntary plans *are not* included in these figures.

Amount Paid

This is the full amount of money paid for the disability. Money paid under voluntary plans for partial weeks of disability *is* included.

Benefits Exhausted

This is the number of spells of disability for which maximum benefits (to which the claimant was eligible) were paid. The following points should be mentioned in connection with the state plan:

1. Disability insurance payments may be reduced when both unemployment and disability insurance benefits have been received during the same benefit year.

2. Since the maximum duration of benefits varies according to the earnings of the claimants, some claimants may exhaust their benefits after drawing fewer than 23.4 weeks (26 weeks in 1948) even though the benefits were not decreased by former unemployment insurance payments.

Chronic Diseases

The list of chronic disease for which the disability insurance data have been prepared has been selected on the basis of the diagnosis and not on the basis of duration of illness. The list does not include all of the conditions which might be considered chronic, but rather diseases which are of particular interest in the chronic disease survey. It is probable that, due to methods of classifying illness for coding purposes, certain acute conditions have been included in the list.

Limitations of the data arising from the statistical, operating and administrative features of the program result, for the most part, in an underreporting of illnesses and injuries in the insured population and in an underreporting of duration of illness. Malingering might have the

[a] The United States Public Health Service *Manual for Coding Causes of Illness According to a Diagnosis Code for Tabulating Morbidity Statistics.*

opposite effect, but it is doubtful that this occurs frequently since the benefits payable under the program would only rarely be more attractive than the salary the claimant would earn in regular employment. Unscheduled visits to claimants are sometimes made and other control measures are used as a check against possible malingering.

It is important to remember that the accompanying information is not complete in that it does not reflect the total amount of unemployment resulting from chronic diseases in the covered labor force, nor can the data be projected in any way so that it reflects the extent of chronic diseases in California. Rather, it indicates the extent to which specified chronic diseases are given as the cause of unemployment in a significant, but selected, segment of the California population.

SUMMARY OF TABULAR MATERIAL

California Disability Insurance data for the selected chronic diseases [a] are presented in detail in the following Tables 1-12.

Disability insurance data constitute the only available current information on chronic disease morbidity in any sizeable segment of the population of California; and this segment is an important one. In the absence of morbidity data for the general population of California other than estimates based on the National Health Survey of 1935-1936, the accompanying tables are presented to assist—even though in a very restricted and incomplete manner—in providing answers to the question: "What is the magnitude of the chronic disease problem in California?"

The State Plan

Extent of Chronic Illness—In 1947 under the State Plan, benefits were paid for 89,160 spells of disability. Of these spells of disability, 37,715 or 42 percent were due to the selected chronic diseases. As shown in Table A, more than seven million dollars were paid out of the State Disability Fund for a total of 380,000 weeks of chronic illness. This sum, which represents 47 percent of the $15,000,000 paid for all causes of disability, by no means covers either the total wage loss or the loss of productivity, the cost of medical care, hospitalization and ancillary services required for most extended periods of disability.

Duration of Compensation for Chronic Illness—The average duration of payments for the selected chronic illnesses was 10.1 weeks per paid spell of disability. It is important to realize that payments are not always made for the duration of the illness since a waiting period must be served for each spell of disability and benefits may be exhausted before the claimant is able to return to work. Benefits for 30 percent of the spells of chronic disability were exhausted (Table 3); that is, the maximum benefits to which the claimant was entitled were paid. It is probable that most of these claimants were still disabled after their insurance benefits were exhausted.

[a] Diseases selected by the Chronic Disease Advisory Committee at the June 11th meeting of the committee.

TABLE A

DISABILITY INSURANCE—STATE PLAN—PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947

Selected Chronic Diseases and All Spells of Disability Duration and Amount of Benefit Payments

	Spells of Disability for:			*Chronic diseases as a percent of all disabilities*
	Selected chronic diseases	*All other diseases*	*All diseases*	
Paid spells	37,715	51,445	89,160	42.3
Weeks paid	380,453	423,574	804,027	47.3
Amount paid	$7,220,099	$8,046,917	$15,267,016	47.3
Average per paid spell				
Weeks	10.1	8.2	9.0	--
Amount	$191.44	$156.42	$171.23	--
Benefits exhausted	11,447	11,019	22,466	51.0

Age as Related to Chronic Disease—Although chronic diseases increase in prevalence as age increases, they occur at all ages. Thirty-nine percent of the spells of chronic disability occurred in persons under 45 years of age (Table B). Benign neoplasms, rheumatic heart disease, nephritis and diseases of the female genital organs are all major causes of disability in persons under 45.

TABLE B

DISABILITY INSURANCE—STATE PLAN—PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947

Spells of Chronic Disease in Persons Under 45 Years by Sex

Age	*Spells of Chronic Disease*		
	Men	*Women*	*Total*
Under 45 years of age	5,592	9,106	14,698
Total—all ages	20,093	17,622	37,715
Percent under 45	27.8	51.7	39.0

The cardiovascular-renal diseases become more important as a cause of disability as age increases. This is also true for malignant neoplasms and rheumatism and arthritis.

Payments for Certain Chronic Diseases—The cardiovascular-renal diseases, cancer and other tumors, rheumatism and arthritis, alcoholism and diabetes account for more than one-fourth of the paid spells of disability and nearly one-third of the amount of money paid for all causes of disability during 1947. Among the chronic diseases the cardiovascular-renal group leads all others both in number of spells and in the amount of payments. During 1947, almost three million dollars were paid for more than 13,000 spells of disability caused by these diseases. Heart disease, the most important cause of disability in this group, accounted for payments amounting to more than one and one-half million dollars and more than one-fourth of all spells of chronic disability which exhausted benefits. Diseases of the circulatory system, especially varicose veins and hemorrhoids, were also important causes of disability in this group.

Payments in excess of one million dollars were made for disabilities due to cancer and other tumors. The duration of compensation for the benign tumors was shorter on the average than for cancer (Table 1), and the percentage of spells which exhausted benefits was less than half that of cancer.

TABLE C

DISABILITY INSURANCE—STATE PLAN—PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947

Payments for Certain Chronic Diseases

Chronic diseases	*Paid spells*	*Amount paid*	*Benefits exhausted*	*Percent of paid spells which exhausted benefits*
Cardiovascular-renal diseases	13,425	$2,952,075	5,407	40.3
Heart disease [a]	6,952	1,677,743	3,139	45.2
Circulatory disease [b]	5,906	1,157,315	2,053	34.8
Nephritis	567	117,017	215	37.9
Cancer and other tumors	5,609	1,027,169	1,319	23.5
Cancer	2,099	475,663	784	37.4
Benign tumors	3,510	551,506	535	15.2
Rheumatism and arthritis	3,184	660,986	1,219	38.3
Alcoholism	796	142,240	212	26.6
Diabetes mellitus	540	111,659	201	37.2
Total	23,554	$4,894,129	8,358	35.5
All spells of disability	89,160	$15,267,016	22,466	25.2
Total as a percentage of all disabilities	26.4	32.1	37.2	

[a] Includes rheumatic heart disease.
[b] Includes intracranial lesions of vascular origin.

Rheumatism and arthritis was among the leading causes of chronic illness for which compensation was paid under the Disability Insurance Program. This cause of disability was second only to the cardiovascular-renal group in the percentage of spells which exhausted benefits.

Alcoholism accounted for the payments of $142,000 for approximately eight hundred spells of disability. Of this number, about one-fifth were for alcoholic psychosis.

Voluntary Plans

Extent of Chronic Illness—The voluntary plan data show many of the same general characteristics found in the state plan data. The differences which are found may be attributed to the differences in the plans themselves and in the populations covered by the plans. During 1947, approximately 10,000 spells of chronic illness were compensated under voluntary plans in the amount of nearly one and one-half million dollars. Twenty-seven percent of all spells of disability were chronic illnesses, and 37 percent of the amount of benefits were for chronic illnesses.

Duration of Compensation for Chronic Illness—Because of the methods used in coding and tabulating the voluntary plan data during 1947, the average duration as shown in the tables is greatly understated. Nevertheless, it is of interest to note that in the voluntary plans, as in the state plan, the average duration of payments for chronic diseases exceeded that of all other diseases by two weeks per paid spell. About 6 percent of the spells of chronic illness exhausted benefits. This is important inasmuch as some voluntary plans pay benefits for as long as 50 to 52 weeks in a year; and unemployment insurance payments do not curtail voluntary plan payments as they do under the state plan.

Age as Related to Chronic Illness—More than one-half of the spells of chronic illness reported by voluntary plans were in persons under 45 years of age. Illnesses in this age group represented 71 percent of all spells of chronic disease in women.

Payments for Certain Chronic Diseases—The cardiovascular-renal diseases, cancer and other tumors, rheumatism and arthritis, alcoholism and diabetes represent 14 percent of all spells of disability, 23 percent of the amount of benefits paid and 25 percent of the spells which exhausted benefits under the voluntary plans.

The cardiovascular-renal diseases are the most important cause of chronic illness in respect to the number of spells paid and the amount of benefits paid.

* * * * * * *

It has been mentioned previously that the limitations of the disability insurance data result for the most part in an underreporting of illnesses and injuries in the covered population, and in an underreporting of duration of illness. These limitations, and the fact that age, sex and other characteristics of the covered population are not known at this time, make it necessary that no attempt is made to project the data so that they apply to the total population of California.

TABLE 1

DISABILITY INSURANCE—STATE PLAN

PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]

Selected Chronic Diseases—Duration of Benefit Payments

Selected chronic diseases	*Number of paid spells of disability*			*Number of full weeks paid*			*Average number of weeks paid per spell*		
	Men	*Women*	*Total*	*Men*	*Women*	*Total*	*Men*	*Women*	*Total*
Malignant neoplasms	1,310	789	2,099	15,654	9,148	24,802	11.9	11.6	11.8
Malignant tumors	1,231	766	1,997	14,759	8,866	23,625	12.0	11.6	11.8
Hodgkin's disease	38	9	47	458	94	552	12.1	[b]	11.7
Leukemias	41	14	55	437	188	625	10.7	13.4	11.4
Benign neoplasms and neoplasms of unspecified nature	626	2,884	3,510	4,422	24,677	29,099	7.1	8.6	8.3
Intracranial lesions of vascular origin	949	217	1,166	14,328	3,290	17,618	15.1	15.2	15.1
Rheumatic heart disease	366	251	617	4,174	3,374	7,548	11.4	13.4	12.2
Chronic rheumatic diseases of the heart	300	203	503	3,459	2,711	6,170	11.5	13.4	12.3
Acute rheumatic fever with heart involvement	66	48	114	715	663	1,378	10.8	13.8	12.1
Heart disease (except rheumatic)	4,709	1,626	6,335	59,960	20,326	80,286	12.7	12.5	12.7
Diseases of the coronary arteries and angina pectoris	2,702	576	3,278	35,243	7,683	42,926	13.0	13.3	13.1
Other diseases of the heart	2,007	1,050	3,057	24,717	12,643	37,360	12.3	12.0	12.2
Diseases of the circulatory system (other than heart disease)	2,598	2,142	4,740	22,139	21,080	43,219	8.5	9.8	9.1
Hypertension	614	781	1,395	7,426	9,318	16,744	12.1	11.9	12.0
Other diseases of the circulatory system	1,984	1,361	3,345	14,713	11,762	26,475	7.4	8.6	7.9
Nephritis (and other diseases of the kidneys)	672	758	1,430	6,107	7,617	13,724	9.1	10.0	9.6
Nephritis (including arteriosclerotic kidney)	360	207	567	3,821	2,353	6,174	10.6	11.4	10.9
Other diseases of the kidneys and ureters	312	551	863	2,286	5,264	7,550	7.3	9.6	8.7

Diabetes mellitus	354	186	540	3,720	2,113	5,833	10.5	11.4	10.8
Rheumatism and arthritis	1,894	1,290	3,184	20,273	14,741	35,014	10.7	11.4	11.0
Alcoholism	752	44	796	7,266	471	7,737	9.7	10.7	9.7
Cirrhosis of the liver	235	50	285	2,453	542	2,995	10.4	10.8	10.5
Anemia (pernicious)	78	70	148	823	729	1,552	10.6	10.4	10.5
Multiple sclerosis	53	27	80	777	364	1,141	14.7	13.5	14.3
Diseases of the organs of vision	773	426	1,199	6,758	4,045	10,803	8.7	9.5	9.0
Diseases of the ear and mastoid process	248	230	478	1,512	1,874	3,386	6.1	8.1	7.1
Chronic pulmonary disease (nontuberculous)	313	246	559	2,842	2,445	5,287	9.1	9.9	9.5
Ulcer of the stomach or duodenum	2,129	453	2,582	16,424	4,539	20,963	7.7	10.0	8.1
Diseases of the female genital organs and breast (excluding venereal, puerperal and tumors)	–	4,491	4,491	–	39,304	39,304	–	8.8	8.8
Diseases of the bones, joints and organs of movement	1,994	1,436	3,430	16,559	12,892	29,451	8.3	9.0	8.6
Osteomyelitis and other diseases of the bone	420	161	581	4,273	1,453	5,726	10.2	9.0	9.9
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	1,574	1,275	2,849	12,286	11,439	23,725	7.8	9.0	8.3
Senility	40	6	46	601	90	691	15.0	[b]	15.0
Total—selected chronic diseases	20,903	17,622	37,715	206,792	173,661	380,453	10.3	9.9	10.1
Total—all spells of disability	49,866	39,294	89,160	443,819	360,208	804,027	8.9	9.2	9.0
Total selected chronic diseases as a percentage of all disabilities	40.3	44.8	42.3	46.6	48.2	47.3			

[a] Includes spells of disability reported terminated December, 1946.

[b] No averages calculated for fewer than ten paid spells of disability.

SOURCE: California Department of Employment. Tables A and B of Report 1021, Nos. 1-4.

TABLE 2

DISABILITY INSURANCE—STATE PLAN
PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]
Selected Chronic Diseases—Amount of Benefit Payments

Selected chronic diseases	*Number of paid spells of disability*			*Amount paid*			*Average amount paid per spell*		
	Men	*Women*	*Total*	*Men*	*Women*	*Total*	*Men*	*Women*	*Total*
Malignant neoplasms	1,310	789	2,099	$304,212	$171,451	$475,663	$232 22	$217 30	$226 61
Malignant tumors	1,231	766	1,997	286,940	166,125	453,065	233 10	216 87	226 87
Hodgkin's disease	38	9	47	8,617	1,718	10,335	226 76	[b]	219 89
Leukemias	41	14	55	8,655	3,608	12,263	211 10	257 71	222 96
Benign neoplasms and neoplasms of unspecified nature	626	2,884	3,510	86,298	465,208	551,506	137 86	161 31	157 12
Intracranial lesions of vascular origin	949	217	1,166	277,354	61,720	339,074	292 26	284 42	290 80
Rheumatic heart disease	366	251	617	79,687	62,437	142,124	217 72	248 75	230 35
Chronic rheumatic diseases of the heart	300	203	503	66,052	50,632	116,684	220 17	249 42	231 98
Acute rheumatic fever with heart involvement	66	48	114	13,635	11,805	25,440	206 59	245 94	223 16
Heart disease (except rheumatic)	4,709	1,626	6,335	1,160,978	374,641	1,535,619	246 54	230 41	242 40
Diseases of the coronary arteries and angina pectoris	2,702	576	3,278	683,454	140,361	823,815	252 94	243 68	251 32
Other diseases of the heart	2,007	1,050	3,057	477,524	234,280	711,804	237 93	223 12	232 84
Diseases of the circulatory system (other than heart disease)	2,598	2,142	4,740	426,803	391,438	818,241	164 28	182 74	172 62
Hypertension	614	781	1,395	142,438	172,589	315,027	231 98	220 98	225 83
Other diseases of the circulatory system	1,984	1,361	3,345	284,365	218,849	503,214	143 33	160 80	150 44
Nephritis (and other diseases of the kidneys)	672	758	1,430	117,781	140,626	258,407	175 27	185 52	180 70
Nephritis (including arteriosclerotic kidney)	360	207	567	73,473	43,544	117,017	204 09	210 36	206 38
Other diseases of the kidneys and ureters	312	551	863	44,308	97,082	141,390	142 01	176 19	163 84
Diabetes mellitus	354	186	540	72,164	39,495	111,659	203 85	212 34	206 78
Rheumatism and arthritis	1,894	1,290	3,184	390,981	270,005	660,986	206 43	209 31	207 60

Alcoholism	752	44	796	134,084	8,156	142,240	178 30	185 36	178 69
Cirrhosis of the liver	235	50	285	46,873	10,003	56,876	199 46	200 06	199 56
Anemia (pernicious)	78	70	148	15,210	13,241	28,451	195 00	189 16	192 24
Multiple sclerosis	53	27	80	15,132	6,525	21,657	285 51	241 07	270 71
Diseases of the organs of vision	773	426	1,199	129,900	75,093	204,993	168 04	176 27	170 97
Diseases of the ear and mastoid process	248	230	478	29,323	35,233	64,556	118 24	153 19	135 05
Chronic pulmonary disease (nontuberculous)	313	246	559	53,948	45,099	99,047	172 36	183 33	177 19
Ulcer of the stomach or duodenum	2,129	453	2,582	320,290	84,364	404,654	150 44	186 23	156 72
Diseases of the female genital organs and breast (excluding venereal, puerperal and tumors)	-	4,491	4,491	-	730,942	730,942	-	162 76	162 76
Diseases of the bones, joints and organs of movement	1,994	1,436	3,430	320,275	240,410	560,685	160 62	167 42	163 46
Osteomyelitis and other diseases of the bone	420	161	581	81,273	26,690	107,963	193 51	165 78	185 82
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	1,574	1,275	2,849	239,002	213,720	452,722	151 84	167 62	158 91
Senility	40	6	46	10,995	1,724	12,719	274 88	[b]	276 50
Total—selected chronic diseases	20,093	17,622	37,715	$3,992,288	$3,227,811	$7,220,099	$198 69	$183 17	$191 44
Total—all spells of disability	49,866	39,294	89,160	$8,568,210	$6,698,806	$15,267,016	$171 82	$170 48	$171 23
Total selected chronic diseases as a percentage of all disabilities	40.3	44.8	42.3	46.6	48.2	47.3			

[a] Includes spells of disability reported terminated December, 1946.

[b] No averages calculated for fewer than ten paid spells of disability.

SOURCE: California Department of Employment. Tables A and B of Report 1021, Nos. 1-4.

TABLE 3

DISABILITY INSURANCE—STATE PLAN
PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947 [a]
Selected Chronic Diseases—Spells Which Exhausted Benefit Payments

Selected chronic diseases	*Number of paid spells of disability*			*Number of spells exhausting benefits [b]*			*Percent of paid spells exhausting benefits*		
	Men	*Women*	*Total*	*Men*	*Women*	*Total*	*Men*	*Women*	*Total*
Malignant neoplasms	1,310	789	2,099	474	310	784	36.2	39.3	37.4
Malignant tumors	1,231	766	1,997	447	299	746	36.3	39.0	37.4
Hodgkin's disease	38	9	47	15	3	18	[c]	[c]	[c]
Leukemias	41	14	55	12	8	20	[c]	[c]	[c]
Benign neoplasms and neoplasms of unspecified nature	626	2,884	3,510	83	452	535	13.3	15.7	15.2
Intracranial lesions of vascular origin	949	217	1,166	596	145	741	62.8	66.8	63.6
Rheumatic heart disease	366	251	617	148	141	289	40.4	56.2	46.8
Chronic rheumatic diseases of the heart	300	203	503	129	108	237	43.0	53.2	47.1
Acute rheumatic fever with heart involvement	66	48	114	19	33	52	[c]	[c]	45.6
Heart disease (except rheumatic)	4,709	1,626	6,335	2,025	825	2,850	43.0	50.7	45.0
Diseases of the coronary arteries and angina pectoris	2,702	576	3,278	1,189	320	1,509	44.0	55.6	46.0
Other diseases of the heart	2,007	1,050	3,057	836	505	1,341	41.7	48.1	43.9
Diseases of the circulatory system (other than heart diseases)	2,598	2,142	4,740	644	668	1,312	24.8	31.2	27.7
Hypertension	614	781	1,395	255	353	608	41.5	45.2	43.6
Other diseases of the circulatory system	1,984	1,361	3,345	389	315	704	19.6	23.1	21.0
Nephritis (and other diseases of the kidneys)	672	758	1,430	177	232	409	26.3	30.6	28.6
Nephritis (including arteriosclerotic kidney)	360	207	567	134	81	215	37.2	39.1	37.9
Other diseases of the kidneys and ureters	312	551	863	43	151	194	13.8	27.4	22.5

Diabetes mellitus	354	186	540	119	82	201	33.6	44.1	37.2
Rheumatism and arthritis	1,894	1,290	3,184	665	554	1,219	35.1	42.9	38.3
Alcoholism	752	44	796	194	18	212	25.8	[c]	26.6
Cirrhosis of the liver	235	50	285	78	22	100	33.2	[c]	35.1
Anemia (pernicious)	78	70	148	24	25	49	[c]	[c]	33.1
Multiple sclerosis	53	27	80	30	18	48	[c]	[c]	[c]
Diseases of the organs of vision	773	426	1,199	208	124	332	26.9	29.1	27.7
Diseases of the ear and mastoid process	248	230	478	25	47	72	10.1	20.4	15.1
Chronic pulmonary disease (nontuberculous)	313	246	559	91	70	161	29.1	28.5	28.8
Ulcer of the stomach or duodenum	2,129	453	2,582	298	121	419	14.0	26.7	16.2
Diseases of the female genital organs and breast (excluding venereal, puerperal and tumors)	--	4,491	4,491	--	889	889	--	19.8	19.8
Diseases of the bones, joints and organs of movement	1,994	1,436	3,430	428	366	794	21.5	25.5	23.1
Osteomyelitis and other diseases of the bone	420	161	581	149	45	194	35.5	28.0	33.4
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	1,574	1,275	2,849	279	321	600	17.7	25.2	21.1
Senility	40	6	46	27	4	31	[c]	[c]	[c]
Total—selected chronic diseases	20,093	17,622	37,715	6,334	5,113	11,447	31.5	29.0	30.4
Total—all spells of disability	49,866	39,294	89,160	12,241	10,225	22,466	24.5	26.0	25.2
Total selected chronic diseases as a percentage of all disabilities	40.3	44.8	42.3	51.7	50.0	51.0			

[a] Includes spells of disability reported terminated December, 1946.

[b] Benefits may have been exhausted through payments of disability insurance or through payments of unemployment and disability insurance. In either case, the last payment was made for disability insurance.

[c] No percentages calculated for fewer than 100 paid spells of disability.

SOURCE: California Department of Employment. Tables A and B of Report 1021, Nos. 1-4.

TABLE 4

DISABILITY INSURANCE—STATE PLAN

PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]

Selected Chronic Diseases—Age of Men Claimants

Selected chronic diseases	*Total paid spells*	*Age groups*						
		Under 18	*18-24*	*Total under 25*	*25-44*	*45-64*	*65 and over*	*Unknown*
Malignant neoplasms	1,310	1	20	21	228	769	251	41
Malignant tumors	1,231	1	14	15	194	739	245	38
Hodgkin's disease	38	-	3	3	21	12	1	1
Leukemias	41	-	3	3	13	18	5	2
Benign neoplasms and neoplasms of unspecified nature	626	-	98	98	258	218	38	14
Intracranial lesions of vascular origin	949	-	4	4	70	573	276	26
Rheumatic heart disease	366	2	28	30	152	141	34	9
Chronic rheumatic diseases of the heart	300	1	12	13	115	129	34	9
Acute rheumatic fever with heart involvement	66	1	16	17	37	12	-	-
Heart disease (except rheumatic)	4,709	1	16	17	432	2,940	1,183	137
Diseases of the coronary arteries and angina pectoris	2,702	-	2	2	232	1,770	632	66
Other diseases of the heart	2,007	1	14	15	200	1,170	551	71
Diseases of the circulatory system (other than heart disease)	2,598	-	55	55	644	1,357	462	80
Hypertension	614	-	-	-	53	339	194	28
Other diseases of the circulatory system	1,984	-	55	55	591	1,018	268	52
Nephritis (and other diseases of the kidneys)	672	-	33	33	223	321	79	16
Nephritis (including arteriosclerotic kidney)	360	-	12	12	95	188	55	10
Other diseases of the kidneys and ureters	312	-	21	21	128	133	24	6

Diabetes mellitus	354	–	7	7	79	192	65	11
Rheumatism and arthritis	1,894	–	28	28	407	1,034	364	61
Alcoholism	752	–	2	2	377	340	24	9
Cirrhosis of the liver	235	–	2	2	50	151	23	9
Anemia (pernicious)	78	–	1	1	7	43	24	3
Multiple sclerosis	53	–	1	1	19	25	7	1
Diseases of the organs of vision	773	2	23	25	209	385	136	18
Diseases of the ear and mastoid process	248	–	17	17	119	87	18	7
Chronic pulmonary disease (nontuberculous)	313	–	10	10	66	170	55	12
Ulcer of the stomach or duodenum	2,129	1	43	44	814	1,073	123	75
Diseases of the bones, joints and organs of movement	1,994	8	128	136	907	771	135	45
Osteomyelitis and other diseases of the bone	420	4	44	48	198	138	25	11
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	1,574	4	84	88	709	633	110	34
Senility	40	–	–	–	–	8	31	1
Total—selected chronic diseases	20,093	15	516	531	5,061	10,598	3,328	575
Total—all spells of disability	49,866	101	2,979	3,080	17,139	22,259	5,953	1,435
Total selected chronic diseases as a percentage of all disabilities	40.3	14.9	17.3	17.2	29.5	47.6	55.9	

[a] Includes spells of disability reported terminated December, 1946.

SOURCE: California Department of Employment, Table A of Report 1023, Nos. 1-4.

TABLE 5

DISABILITY INSURANCE—STATE PLAN

PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]

Selected Chronic Diseases—Age of Women Claimants

Selected chronic diseases	*Total paid spells*	*Age groups*						
		Under 18	*18-24*	*Total under 25*	*25-44*	*45-64*	*65 and over*	*Unknown*
Malignant neoplasms	789	–	13	13	239	462	49	26
Malignant tumors	766	–	9	9	231	452	48	26
Hodgkin's disease	9	–	2	2	6	1	–	–
Leukemias	14	–	2	2	2	9	1	–
Benign neoplasms and neoplasms of unspecified nature	2,884	2	67	69	1,794	925	17	79
Intracranial lesions of vascular origin	217	–	–	–	21	153	39	4
Rheumatic heart disease	251	–	33	33	123	76	10	9
Chronic rheumatic diseases of the heart	203	–	15	15	100	69	10	9
Acute rheumatic fever with heart involvement	48	–	18	18	23	7	–	–
Heart disease (except rheumatic)	1,626	1	23	24	404	949	191	58
Diseases of the coronary arteries and angina pectoris	576	1	1	2	97	372	86	19
Other diseases of the heart	1,050	–	22	22	307	577	105	39
Diseases of the circulatory system (other than heart disease)	2,142	1	63	64	707	1,144	158	69
Hypertension	781	–	8	8	130	518	94	31
Other diseases of the circulatory system	1,361	1	55	56	577	626	64	38
Nephritis (and other diseases of the kidneys)	758	2	99	101	366	255	20	16
Nephritis (including arteriosclerotic kidney)	207	–	22	22	60	106	11	8
Other diseases of the kidneys and ureters	551	2	77	79	306	149	9	8

Diabetes mellitus	186	–	13	13	39	112	19	3
Rheumatism and arthritis	1,290	–	32	32	389	697	129	43
Alcoholism	44	–	1	1	24	15	1	3
Cirrhosis of the liver	50	–	–	–	22	19	7	2
Anemia (pernicious)	70	–	7	7	23	35	5	–
Multiple sclerosis	27	–	5	5	17	4	–	1
Diseases of the organs of vision	426	1	24	25	158	199	32	12
Diseases of the ear and mastoid process	230	1	20	21	108	88	6	7
Chronic pulmonary disease (nontuberculous)	246	–	24	24	117	87	10	8
Ulcer of the stomach or duodenum	453	–	14	14	207	203	13	16
Diseases of the female genital organs and breast (excluding venereal, puerperal and tumors)	4,491	5	489	494	2,638	1,197	37	125
Diseases of the bones, joints and organs of movement	1,436	3	101	104	666	577	53	36
Osteomyelitis and other diseases of the bone	161	2	16	18	68	66	4	5
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	1,275	1	85	86	598	511	49	31
Senility	6	–	–	–	–	2	4	–
Total—selected chronic diseases	17,622	16	1,028	1,044	8,062	7,199	800	517
Total—all spells of disability	39,294	59	3,843	3,902	18,814	14,016	1,442	1,120
Total selected chronic diseases as a percentage of all disabilities	44.8	[b]	26.7	26.8	42.9	51.4	55.5	

[a] Includes spells of disability reported terminated December, 1946.

[b] No percentages calculated for fewer than 100 paid spells of disability.

SOURCE: California Department of Employment. Table B of Report 1023, Nos. 1-4.

TABLE 6

DISABILITY INSURANCE—STATE PLAN

SPELLS OF DISABILITY REPORTED TERMINATED, 1947

Selected Chronic Diseases—Percentage Distribution by Age Groups and Sex

Selected chronic diseases	*Men*				*Women*				*Total—Men and Women*				
	Under 25	*25-44*	*45-64*	*65 and over*	*Under 25*	*25-44*	*45-64*	*65 and over*	*Under 25*	*25-44*	*45-64*	*65 and over*	*Total all ages* [b]
Malignant neoplasms	4.0	4.5	7.3	7.5	1.2	3.0	6.4	6.1	2.2	3.6	6.9	7.3	5.6
Benign neoplasms	18.5	5.1	2.1	1.1	6.6	22.2	12.8	2.1	10.6	15.6	6.4	1.3	9.3
Intracranial lesions of vascular origin	[c]	1.4	5.4	8.3	–	[c]	2.1	4.9	[c]	[c]	4.1	7.6	3.1
Rheumatic heart disease	5.6	3.0	1.3	1.0	3.2	1.5	1.1	1.2	4.0	2.1	1.2	1.1	1.6
Heart disease	3.2	8.5	27.8	35.5	2.3	5.0	13.2	23.9	2.6	6.4	21.9	33.3	16.8
Diseases of the circulatory system	10.4	12.7	12.8	13.9	6.1	8.8	15.9	19.8	7.6	10.3	14.1	15.0	12.6
Nephritis (and other diseases of the kidneys)	6.2	4.4	3.0	2.4	9.7	4.5	3.5	2.5	8.5	4.5	3.2	2.4	3.8
Diabetes mellitus	1.3	1.6	1.8	2.0	1.2	[c]	1.6	2.4	1.3	[c]	1.7	2.0	1.4
Rheumatism and arthritis	5.3	8.0	9.8	10.9	3.1	4.8	9.7	16.1	3.8	6.1	9.7	11.9	8.4
Alcoholism	[c]	7.4	3.2	[c]	[c]	[c]	[c]	[c]	[c]	3.1	2.0	[c]	2.1
Cirrhosis of the liver	[c]	[c]	1.4	[c]	–	[c]	[c]	[c]	[c]	[c]	[c]	[c]	[c]
Ulcer of the stomach or duodenum	8.3	16.1	10.1	3.7	1.3	2.6	2.8	1.6	3.7	7.8	7.2	3.3	6.8

Diseases of the female genital organs and breast	–	–	–	–	47.3	32.7	16.6	4.6	31.4	20.1	6.7	[c]	11.9
Other selected chronic diseases [a]	35.8	26.2	14.0	12.2	17.8	13.5	13.8	13.8	23.9	18.4	13.9	12.5	15.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Number—Selected Chronic Diseases	531	5,061	10,598	3,328	1,044	8,062	7,199	800	1,575	13,123	17,797	4,128	37,715

[a] Includes anemia, multiple sclerosis, diseases of the ear and eye, chronic pulmonary disease (nontuberculous), diseases of the bones and joints and senility.

[b] Includes unknown ages.
[c] Less than 1 percent.
SOURCE: Tables 4 and 5.

TABLE 7

DISABILITY INSURANCE—VOLUNTARY PLANS
PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]
Selected Chronic Diseases—Duration of Benefit Payments

Selected chronic diseases	*Number of paid spells of disability*			*Number of full weeks paid*[b]			*Average number of weeks paid per spell*		
	Men	*Women*	*Total*	*Men*	*Women*	*Total*	*Men*	*Women*	*Total*
Malignant neoplasms	197	62	259	1,826	767	2,593	9.3	12.4	10.0
Malignant tumors	184	59	243	1,697	738	2,435	9.2	12.5	10.0
Hodgkin's disease	7	1	8	96	9	105	[c]	[c]	[c]
Leukemias	6	2	8	33	20	53	[c]	[c]	[c]
Benign neoplasms and neoplasms of unspecified nature	341	509	850	1,292	3,212	4,504	3.8	6.3	5.3
Intracranial lesions of vascular origin	106	11	117	1,291	166	1,457	12.2	15.1	12.5
Rheumatic heart disease	42	11	53	404	165	569	9.6	15.0	10.7
Chronic rheumatic diseases of the heart	39	11	50	401	165	566	10.3	15.0	11.3
Acute rheumatic fever with heart involvement	3	--	3	3	--	3	[c]	--	[c]
Heart disease (except rheumatic)	1,071	150	1,221	11,013	1,416	12,429	10.3	9.4	10.2
Diseases of the coronary arteries and angina pectoris	557	35	592	5,810	458	6,268	10.4	13.1	10.6
Other diseases of the heart	514	115	629	5,203	958	6,161	10.1	8.3	9.8
Diseases of the circulatory system (other than heart disease)	1,370	394	1,764	4,890	2,371	7,261	3.6	6.0	4.1
Hypertension	189	92	281	1,454	1,141	2,595	7.7	12.4	9.2
Other diseases of the circulatory system	1,181	302	1,483	3,436	1,230	4,666	2.9	4.1	3.1
Nephritis (and other diseases of the kidneys)	314	165	479	1,383	868	2,251	4.4	5.3	4.7
Nephritis (including arteriosclerotic kidney)	78	24	102	404	216	620	5.2	9.0	6.1
Other diseases of the kidneys and ureters	236	141	377	979	652	1,631	4.1	4.6	4.3

Diabetes mellitus	91	15	106	516	69	585	5.7	4.6	5.5
Rheumatism and arthritis	462	141	603	3,009	1,226	4,235	6.5	8.7	7.0
Alcoholism	19	1	20	119	3	122	6.3	[c]	6.1
Cirrhosis of the liver	29	1	30	141	2	143	4.9	[c]	4.8
Anemia (pernicious)	10	7	17	66	57	123	6.6	[c]	7.2
Multiple sclerosis	7	5	12	99	91	190	[c]	[c]	15.8
Diseases of the organs of vision	394	104	498	1,590	545	2,135	4.0	5.2	4.3
Diseases of the ear and mastoid process	205	78	283	558	271	829	2.7	3.5	2.9
Chronic pulmonary disease (nontuberculous)	104	31	135	560	175	735	5.4	5.6	5.4
Ulcer of the stomach or duodenum	839	63	902	4,571	482	5,053	5.4	7.6	5.6
Diseases of the female genital organs and breast (excluding venereal, puerperal and tumors)	--	1,106	1,106	--	6,148	6,148	--	5.6	5.6
Diseases of the bones, joints and organs of movement	1,053	262	1,315	3,534	1,086	4,620	3.4	4.1	3.5
Osteomyelitis and other diseases of the bone	97	23	120	408	118	526	4.2	5.1	4.4
Diseases of the joints and organs of movement (Other than rheumatism and arthritis)	956	239	1,195	3,126	968	4,094	3.3	4.0	3.4
Senility	1	--	1	3	--	3	[c]	--	[c]
Total—selected chronic diseases	6,655	3,116	9,771	36,865	19,120	55,985	5.5	6.1	5.7
Total—all spells of disability	25,700	10,298	35,998	97,884	49,074	146,958	3.8	4.8	4.1
Total selected chronic diseases as a percentage of all disabilities	25.9	30.3	27.1	37.7	39.0	38.1			

[a] Includes spells of disability reported terminated December, 1946.
[b] Does not include partial weeks of disability (days) compensated.
[c] No averages calculated for fewer than ten paid spells of disability.

SOURCE: California Department of Employment, Tables C and D of Report 1021, Nos. 1-4.

6—L-8179

TABLE 8

DISABILITY INSURANCE—VOLUNTARY PLANS
PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]
Selected Chronic Diseases—Amount of Benefit Payments

Selected chronic diseases	Number of paid spells of disability			Amount paid			Average amount paid per spell		
	Men	Women	Total	Men	Women	Total	Men	Women	Total
Malignant neoplasms	197	62	259	$49,375	$17,608	$66,983	$250 63	$284 00	$258 62
Malignant tumors	184	59	243	45,378	16,985	62,363	246 62	287 88	256 64
Hodgkin's disease	7	1	8	3,084	186	3,270	[b]	[b]	[b]
Leukemias	6	2	8	913	437	1,350	[b]	[b]	[b]
Benign neoplasms and neoplasms of unspecified nature	341	509	850	36,633	77,279	113,912	107 43	151 83	134 01
Intracranial lesions of vascular origin	106	11	117	34,797	3,785	38,582	328 27	344 09	329 76
Rheumatic heart disease	42	11	53	10,328	3,747	14,075	245 90	340 64	265 57
Chronic rheumatic diseases of the heart	39	11	50	10,211	3,747	13,958	261 82	340 64	279 16
Acute rheumatic fever with heart involvement	3	--	3	117	--	117	[b]	--	[b]
Heart disease (except rheumatic)	1,071	150	1,221	297,104	33,793	330,897	277 41	225 29	271 00
Diseases of the coronary arteries and angina pectoris	557	35	592	156,732	10,984	167,716	281 39	313 83	283 30
Other diseases of the heart	514	115	629	140,372	22,809	163,181	273 10	198 34	259 43
Diseases of the circulatory system (other than heart disease)	1,370	394	1,764	143,451	55,814	199,265	104 71	141 66	112 96
Hypertension	189	92	281	40,457	25,077	65,534	214 06	272 58	233 22
Other diseases of the circulatory system	1,181	302	1,483	102,994	30,737	133,731	87 21	101 78	90 18
Nephritis (and other diseases of the kidneys)	314	165	479	38,530	21,209	59,739	122 71	128 54	124 72
Nephritis (including arteriosclerotic kidney)	78	24	102	11,091	4,731	15,822	142 19	197 12	155 12
Other diseases of the kidneys and ureters	236	141	377	27,439	16,478	43,917	116 27	116 87	116 49
Diabetes mellitus	91	15	106	15,021	1,538	16,559	165 07	102 53	156 22
Rheumatism and arthritis	462	141	603	80,364	29,148	109,512	173 95	206 72	181 61
Alcoholism	19	1	20	3,049	69	3,118	160 47	[b]	155 90
Cirrhosis of the liver	29	1	30	4,100	69	4,169	141 38	[b]	138 97
Anemia (pernicious)	10	7	17	1,949	1,385	3,334	194 90	[b]	196 12
Multiple sclerosis	7	5	12	2,803	2,350	5,153	[b]	[b]	429 42
Diseases of the organs of vision	394	104	498	45,006	13,160	58,166	114 23	126 54	116 80
Diseases of the ear and mastoid process	205	78	283	16,643	7,526	24,169	81 19	96 49	85 40
Chronic pulmonary disease (nontuberculous)	104	31	135	16,008	4,455	20,463	153 92	143 71	151 58

Ulcer of the stomach or duodenum	839	63	902	127,866	11,706	139,572	152	40	185 81	154 74
Diseases of the female genital organs and breast (excluding venereal, puerperal and tumors)	--	1,106	1,106	--	147,179	147,179	--		133 07	133 07
Diseases of the bones, joints and organs of movement	1,053	262	1,315	104,319	27,560	131,879	99	07	105 19	100 29
Osteomyelitis and other diseases of the bone	97	23	120	11,652	2,757	14,409	120	12	119 87	120 08
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	956	239	1,195	92,667	24,803	117,470	96	93	103 78	98 30
Senility	1	--	1	99	--	99	[b]		--	[b]
Total—selected chronic diseases	6,655	3,116	9,771	$1,027,445	$459,380	$1,486,825	$154	39	$147 43	$152 17
Total—all spells of disability	25,700	10,298	35,998	$2,818,187	$1,192,226	$4,010,413	$109	66	$115 77	$111 41
Total selected chronic diseases as a percentage of all disabilities	25.9	30.3	27.1	36.5	38.5	37.1				

[a] Includes spells of disability reported terminated December, 1946.

[b] No averages calculated for fewer than ten paid spells of disability.

SOURCE: California Department of Employment. Tables C and D of Report 1021, Nos. 1-4.

TABLE 9

DISABILITY INSURANCE—VOLUNTARY PLANS
PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]
Selected Chronic Diseases—Spells Which Exhausted Benefit Payments

Selected chronic diseases	*Number of paid spells of disability*			*Number of spells exhausting benefits*[b]			*Percent of paid spells exhausting benefits*		
	Men	*Women*	*Total*	*Men*	*Women*	*Total*	*Men*	*Women*	*Total*
Malignant neoplasms	197	62	259	22	14	36	11.2	[c]	13.9
Malignant tumors	184	59	243	21	14	35	11.4	[c]	14.4
Hodgkin's disease	7	1	8	1	--	1	[c]	--	[c]
Leukemias	6	2	8	--	--	--	--	--	--
Benign neoplasms and neoplasms of unspecified nature	341	509	850	7	12	19	2.1	2.4	2.2
Intracranial lesions of vascular origin	106	11	117	31	5	36	29.2	[c]	30.8
Rheumatic heart disease	42	11	53	7	4	11	[c]	[c]	[c]
Chronic rheumatic diseases of the heart	39	11	50	7	4	11	[c]	[c]	[c]
Acute rheumatic fever with heart involvement	3	--	3	--	--	--	--	--	--
Heart disease (except rheumatic)	1,071	150	1,221	178	24	202	16.6	16.0	16.5
Diseases of the coronary arteries and angina pectoris	557	35	592	91	10	101	16.3	[c]	17.1
Other diseases of the heart	514	115	629	87	14	101	16.9	12.2	16.1
Diseases of the circulatory system (other than heart disease)	1,370	394	1,764	41	31	72	3.0	7.9	4.1
Hypertension	189	92	281	22	23	45	11.6	[c]	16.0
Other diseases of the circulatory system	1,181	302	1,483	19	8	27	1.6	2.6	1.8
Nephritis (and other diseases of the kidneys)	314	165	479	10	9	19	3.2	5.5	4.0
Nephritis (including arteriosclerotic kidney)	78	24	102	5	3	8	[c]	[c]	7.8
Other diseases of the kidneys and ureters	236	141	377	5	6	11	2.1	4.3	2.9

Diabetes mellitus	91	15	106	5	1	6	[c]	[c]	5.7
Rheumatism and arthritis	462	141	603	43	19	62	9.3	13.5	10.3
Alcoholism	19	1	20	1	--	1	[c]	--	[c]
Cirrhosis of the liver	29	1	30	1	--	1	[c]	--	[c]
Anemia (pernicious)	10	7	17	--	--	--	--	--	--
Multiple sclerosis	7	5	12	2	2	4	[c]	[c]	[c]
Diseases of the organs of vision	394	104	498	8	8	16	2.0	7.7	3.2
Diseases of the ear and mastoid process	205	78	283	2	2	4	1.0	[c]	1.4
Chronic pulmonary disease (nontuberculous)	104	31	135	7	2	9	6.7	[c]	6.7
Ulcer of the stomach or duodenum	839	63	902	15	3	18	1.8	[c]	2.0
Diseases of the female genital organs and breast (excluding venereal, puerperal and tumors)	--	1,106	1,106	--	30	30	--	2.7	2.7
Diseases of the bones, joints and organs of movement	1,053	262	1,315	20	5	25	1.9	1.9	1.9
Osteomyelitis and other diseases of the bone	97	23	120	3	--	3	[c]	--	2.5
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	956	239	1,195	17	5	22	1.8	2.1	1.8
Senility	1	--	1	--	--	--	--	--	--
Total—selected chronic diseases	6,655	3,116	9,771	400	171	571	6.0	5.5	5.8
Total—all spells of disability	25,700	10,298	35,998	808	1,018	1,826	3.1	9.9	5.1
Total selected chronic diseases as a percentage of all disabilities	25.9	30.3	27.1	49.5	16.8	31.3			

[a] Includes spells of disability reported terminated December, 1946.

[b] Represent benefits exhausted through the payment of disability insurance only. Voluntary disability insurance payments are not reduced by unemployment insurance payments.

[c] No percentages calculated for fewer than 100 paid spells of disability.

SOURCE: California Department of Employment. Tables C and D of Report 1021, Nos. 1-4.

TABLE 10

DISABILITY INSURANCE—VOLUNTARY PLANS
PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]
Selected Chronic Diseases—Age of Men Claimants

Selected chronic diseases	*Total paid spells*	*Age groups*						
		Under 18	*18-24*	*Total under 25*	*25-44*	*45-64*	*65 and over*	*Unkown*
Malignant neoplasms	197	1	7	8	40	115	33	1
Malignant tumors	184	-	4	4	35	111	33	1
Hodgkin's disease	7	-	2	2	4	1	-	-
Leukemias	6	1	1	2	1	3	-	-
Benign neoplasms and neoplasms of unspecified nature	341	-	48	48	178	97	17	1
Intracranial lesions of vascular origin	106	-	1	1	16	66	22	1
Rheumatic heart disease	42	-	1	1	17	20	3	1
Chronic rheumatic diseases of the heart	39	-	1	1	15	19	3	1
Acute rheumatic fever with heart involvement	3	-	-	-	2	1	-	-
Heart disease (except rheumatic)	1,071	2	6	8	193	698	166	6
Diseases of the coronary arteries and angina pectoris	557	-	2	2	85	384	81	5
Other diseases of the heart	514	2	4	6	108	314	85	1
Diseases of the circulatory system (other than heart diseasse)	1,370	-	49	49	608	619	87	7
Hypertension	189	-	1	1	29	128	31	-
Other diseases of the circulatory system	1,181	-	48	48	579	491	56	7
Nephritis (and other diseases of the kidneys)	314	-	26	26	166	104	17	1
Nephritis (including arteriosclerotic kidney)	78	-	1	1	40	32	5	-
Other diseases of the kidneys and ureters	236	-	25	25	126	72	12	1
Diabetes mellitus	91	-	2	2	26	51	11	1

Rheumatism and arthritis	462	1	4	5	138	250	66	3
Alcoholism	19	-	-	-	6	12	-	1
Cirrhosis of the liver	29	-	-	-	12	17	-	-
Anemia (pernicious)	10	-	-	-	1	8	1	-
Multiple sclerosis	7	-	-	-	3	4	-	-
Diseases of the organs of vision	394	-	24	24	185	153	28	4
Diseases of the ear and mastoid process	205	-	18	18	111	66	9	1
Chronic pulmonary disease (nontuberculous)	104	-	3	3	32	58	10	1
Ulcer of the stomach or duodenum	839	-	33	33	400	362	38	6
Diseases of the bones, joints and organs of movement	1,053	2	60	62	550	403	32	6
Osteomyelitis and other diseases of the bone	97	-	11	11	55	30	1	-
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	956	2	49	51	495	373	31	6
Senility	1	-	-	-	-	-	1	-
Total—selected chronic diseases	6,655	6	282	288	2,682	3,103	541	41
Total—all spells of disability	25,700	47	2,124	2,171	12,430	9,472	1,443	184
Total selected chronic diseases as a percentage of all disabilities	25.9	[b]	13.3	13.3	21.6	32.8	37.5	

[a] Includes spells of disability reported terminated December, 1946.

[b] No percentages calculated for fewer than 100 paid spells of disability.

SOURCE: California Department of Employment. Table C of Report 1023, Nos. 1-4.

TABLE 11

DISABILITY INSURANCE—VOLUNTARY PLANS
PAID SPELLS OF DISABILITY REPORTED TERMINATED, 1947[a]
Selected Chronic Diseases—Age of Women Claimants

Selected chronic diseases	*Total paid spells*	*Age groups*						
		Under 18	*18-24*	*Total under 25*	*25-44*	*45-64*	*65 and over*	*Unknown*
Malignant neoplasms	62	–	–	–	25	34	2	1
Malignant tumors	59	–	–	–	23	33	2	1
Hodgkin's disease	1	–	–	–	–	1	–	–
Leukemias	2	–	–	–	2	–	–	–
Benign neoplasms and neoplasms of unspecified nature	509	–	34	34	345	126	3	1
Intracranial lesions of vascular origin	11	–	–	–	2	9	–	–
Rheumatic heart disease	11	–	1	1	6	4	–	–
Chronic rheumatic diseases of the heart	11	–	1	1	6	4	–	–
Acute rheumatic fever with heart involvement	–	–	–	–	–	–	–	–
Heart disease (except rheumatic)	150	–	5	5	61	72	12	–
Diseases of the coronary arteries and angina pectoris	35	–	–	–	10	19	6	–
Other diseases of the heart	115	–	5	5	51	53	6	–
Diseases of the circulatory system (other than heart disease)	394	–	27	27	211	136	14	6
Hypertension	92	–	2	2	26	48	13	3
Other diseases of the circulatory system	302	–	25	25	185	88	1	3
Nephritis (and other diseases of the kidneys)	165	–	32	32	81	49	2	1
Nephritis (including arteriosclerotic kidney)	24	–	2	2	12	9	1	–
Other diseases of the kidneys and ureters	141	–	30	30	69	40	1	1
Diabetes mellitus	15	–	4	4	6	5	–	

Rheumatism and arthritis	141	-	4	4	65	69	2	1
Alcoholism	1	-	-	-	1	-	-	-
Cirrhosis of the liver	1	-	-	-	1	-	-	-
Anemia (pernicious)	7	-	1	1	4	2	-	-
Multiple sclerosis	5	-	2	2	3	-	-	-
Diseases of the organs of vision	104	-	10	10	49	43	-	2
Diseases of the ear and mastoid process	78	-	15	15	41	22	-	-
Chronic pulmonary disease (nontuberculous)	31	-	3	3	18	10	-	-
Ulcer of the stomach or duodenum	63	-	7	7	37	18	1	-
Disease of the female genital organs and breast (excluding venereal, puerperal and tumors)	1,106	2	181	183	747	169	2	5
Diseases of the bones, joints and organs of movement	262	-	32	32	159	67	2	2
Osteomyelitis and other diseases of the bone	23	-	5	5	13	4	1	-
Diseases of the joints and organs of movement (other than rheumatism and arthritis)	239	-	27	27	146	63	1	2
Senility	-	-	-	-	-	-	-	-
Total—selected chronic diseases	3,116	2	358	360	1,862	835	40	19
Total—all spells of disability	10,298	18	2,110	2,128	5,802	2,213	84	71
Total selected chronic diseases as a percentage of all disabilities	30.3	[b]	17.0	16.9	32.0	37.7	[b]	

[a] Includes spells of disability reported terminated December, 1946.

[b] No percentages calculated for fewer than 100 paid spells of disability.

SOURCE: California Department of Employment, Table D of Report 1023, Nos. 1-4.

TABLE 12

DISABILITY INSURANCE—VOLUNTARY PLANS

SPELLS OF DISABILITY REPORTED TERMINATED, 1947

Selected Chronic Diseases—Percentage Distribution by Age Groups and Sex

Selected chronic diseases	Men				Women				Total—Men and Women				
	Under 25	25-44	45-64	65 and over	Under 25	25-44	45-64	65 and over	Under 25	25-44	45-64	65 and over	Total all ages [b]
Malignant neoplasms	2.8	1.5	3.7	6.1	–	1.3	4.1		1.2	1.4	3.8	6.0	2.6
Benign neoplasms	16.7	6.6	3.1	3.1	9.4	18.5	15.1		12.7	11.5	5.7	3.4	8.7
Intracranial lesions of vascular origin	[c]	[c]	2.1	4.1	–	[c]	1.1		[c]	[c]	1.9	3.8	1.2
Rheumatic heart disease	[c]	[c]	[c]	[c]	[c]	[c]	[c]		[c]	[c]	[c]	[c]	[c]
Heart disease	2.8	7.2	22.5	30.7	1.4	3.3	8.6		2.0	5.6	19.6	30.6	12.5
Diseases of the circulatory system	17.0	22.7	19.9	16.1	7.5	11.3	16.3		11.7	18.0	19.2	17.4	18.1
Nephritis (and other diseases of the kidneys)	9.0	6.2	3.4	3.1	8.9	4.4	5.9		9.0	5.4	3.9	3.3	4.9
Diabetes mellitus	[c]	1.0	1.6	2.0	1.1	[c]	[c]		[c]	[c]	1.4	1.9	1.1
Rheumatism and arthritis	1.7	5.1	8.1	12.2	1.1	3.5	8.3		1.4	4.5	8.1	11.7	6.2
Alcoholism	–	[c]	[c]	–	–	[c]	–		–	[c]	[c]	–	[c]
Cirrhosis of the liver	–	[c]	[c]	–	–	[c]	–		–	[c]	[c]	–	[c]
Ulcer of the stomach or duodenum	11.5	14.9	11.7	7.0	1.9	2.0	2.2		6.2	9.6	9.6	6.7	9.2
Diseases of the female genital organs and breast	–	–	–	–	50.8	40.1	20.2		28.2	16.4	4.3	[c]	11.3
Other selected chronic diseases [a]	37.2	32.9	22.3	15.0	17.5	14.7	17.2		26.2	25.4	21.2	14.3	23.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	[d]	100.0	100.0	100.0	100.0	100.0
Total number—selected chronic diseases	288	2,682	3,103	541	360	1,862	835	40	648	4,544	3,938	581	9,771

[a] Includes anemia, multiple sclerosis, diseases of the ear and eye, chronic pulmonary disease (nontuberculous), diseases of the bones and joints and senility.

[b] Includes unknown ages.

[c] Less than 1 percent.

[d] No percentages calculated. Only 40 spells of disability were included in this age group.

SOURCE: Tables 10 and 11.

APPENDIX A-4

ESTIMATES OF MORBIDITY FROM CHRONIC ILLNESS IN CALIFORNIA BASED ON THE NATIONAL HEALTH SURVEY

USE OF THE NATIONAL HEALTH SURVEY

The National Health Survey was conducted in 1935-1936 by the United States Public Health Service. The survey was a nation-wide house-to-house canvass of 703,092 households comprising 2,502,391 individuals located in 18 states. It was confined largely to 83 urban areas. Data were obtained by asking a responsible member of each household to recall illnesses occurring within the previous 12 months.[a]

The National Health Survey provided morbidity rates considered applicable to the general population. Although the rates were subject to many qualifications, no better sources for such rates have since been developed. In the absence of more accurate information continued widespread use has been made of the National Health Survey.[b]

In applying the survey data to California for 1947, use has been made only of those rates that would produce minimum estimates—i.e. estimates such that there was reasonable assurance of the existence of *at least* the specified amount of morbidity. No adjustment has been made for under enumeration of illnesses, although it is known that there was substantial underreporting in the National Health Survey. Furthermore, no adjustment has been made for age distribution, although the population enumerated in the survey was on the average younger than the population of California.

ESTIMATES OF DISABLING CHRONIC ILLNESS

Application of National Health Survey Rates to California for 1947 provides the following minimum estimates of morbidity from disabling chronic illness (Tables 1 and 2):

	Estimated prevalence	*Estimated weeks of disability*
Cardiovascular-renal diseases	109,000	1,900,000
Rheumatism and allied diseases	58,000	1,000,000
Cancer and other tumors	29,000	410,000
Diabetes mellitus	9,000	220,000
All disabling chronic illness (excluding tuberculosis and mental disease)	455,000	9,090,000

These estimates exclude many early or mild cases of chronic illness because they refer only to *disabling* illness—illness causing at least seven consecutive days of interference with usual occupation. For "all disabling chronic illness," they refer only to illness which in addition to the seven days disability, causes three months or more of recognized symptoms.

[a] G. St. J. Perrott, C. Tibbits, R. H. Britten; *Scope and Method of the National Health Survey;* Public Health Report 54, Reprint 2098.

[b] It was used in almost all studies of chronic illness conducted in other states. In California it was used in the *Hospital Study of Los Angeles County,* conducted in 1947 by James A. Hamilton and Associates; and also, in the 1947 *Report to the Santa Barbara County Medical Society* by the Citizens Advisory Committee on Health and Hospital Care.

The estimates for cancer are particularly low.[a] In 1947 there were over 14,000 cancer deaths in California, and from this it can be estimated [b] that there were approximately 50,000 cases of cancer which were alive at some time during the year.

ESTIMATES OF NONDISABLING CHRONIC ILLNESS

The National Health Survey reported a very substantial amount of nondisabling chronic illness—illness considered to be handicapping and causing symptoms for three months or more, but not causing seven consecutive days of disability. Thirteen percent of the population covered in the survey reported such illness. Applied to California's population in 1947 this is approximately 1,280,000 cases of nondisabling chronic illness.

CHRONIC ILLNESS IN RELATION TO AGE

One of the major findings of the National Health Survey was that although the prevalence rate for chronic illness increases sharply with age, the greatest number of persons with chronic illness are in the productive years of life between 25 and 64 (Table 3). The survey showed that 57.5 percent of the chronic invalids, and 64 percent of those with disabling chronic illness not causing complete invalidism were between the ages of 25 and 64.

COMPARISON WITH DATA FROM THE CALIFORNIA DISABILITY INSURANCE PROGRAM

Because of differences in the definition of chronic illness, it is not possible to make a direct comparison between estimates based on the National Health Survey and the data obtained from the California Disability Insurance Program. The estimates for the general population of the State, based on the survey are, as would be expected, considerably larger than the figures for the segment of the population insured under the Disability Insurance Program. However, there is general consistency between the two sets of figures. With the exception of cancer, the rank order of the specific chronic diseases is the same. Detailed comparisons are qualified not only by differences in definition, but differences in the age, sex, race and other characteristics of the two population groups.

* * * * * * *

The attached tables show in somewhat more detail the rates of morbidity from disabling chronic illness in the National Health Survey, and the application of these rates to California for 1947. The application to California is based on the United States Census Bureau estimate of a population of 9,876,000 as of July 1, 1947. Data in the tables are presented separately for illness causing invalidism (disability for the full 12 months), and illness causing disability for less than 12 months.

---

[a] Estimates for diabetes are also very low—see Appendix D-3.

[b] Using a ratio of 3.5 cases per death. This ratio is based on the findings of special cancer morbidity surveys in selected areas. See H. J. Sommers; *The Incidence of Cancer in San Francisco and Alameda Counties, 1938;* Public Health Reports, Reprint 2412. Also, H. F. Dorn; *Illness from Cancer in the U. S.;* Public Health Reports, Reprint 2537. The number of cancer deaths to which the ratio is applied includes leukemias and Hodgkin's disease.

TABLE 1

ESTIMATED ANNUAL PREVALENCE[a] OF DISABLING[b] CHRONIC ILLNESS

National Health Survey Rates and Applications to California, 1947

Illness	*Disability for at least 7 days but less than 1 year*		*Disability for entire year*	
	Rate per 1,000 population	*Estimated prevalence California 1947*	*Rate per 1,000 population*	*Estimated prevalence California 1947*
Cardiovascular-renal diseases	8.2	81,000	2.8	28,000
Rheumatism and allied diseases	4.7	46,000	1.2	12,000
Cancer and other tumors	2.7	27,000	.2	2,000
Diabetes mellitus	.6	6,000	.3	3,000
All disabling chronic illness[c] (excludcluding tuberculosis and mental disease)	35.5	351,000	10.5	104,000
All disabling illness (both chronic and acute and including tuberculosis and mental disease)	159.3	1,573,000	11.7	116,000

[a] Prevalence—Refers to number of illnesses rather than number of persons. However, for chronic illness there was considered to be negligible reporting of several illnesses for one individual.

[b] Disabling Illness—Illness that kept the person from work, school or other usual occupation for at least seven consecutive days; or required hospitalization; or caused death.

[c] Chronic Illness—Refers here to illness causing symptoms for three months or more.

SOURCE: National Health Survey.

TABLE 2

ESTIMATED WEEKS OF DISABILITY FROM CHRONIC ILLNESS[a]

National Health Survey Rates and Applications to California, 1947

Illness	*Disability for at least 7 days but less than 1 year*		*Disability for entire year*	
	Average weeks of disability per illness per year	*Estimated weeks of disability California 1947*	*Average weeks of disability per illness per year*	*Estimated weeks of disability California 1947*
Cardiovascular—renal diseases	5.5	440,000	(52 by	1,460,000
Rheumatism and allied diseases	8.2	380,000	definition)	620,000
Cancer and other tumors	11.5	310,000		100,000
Diabetes mellitus	10.0	60,000		160,000
All disabling chronic illness[b] (Excluding tuberculosis and mental disease)	10.5	3,680,000		5,410,000
All disabling illness (Both chronic and acute and including tuberculosis and mental disease)	5.0	7,860,000		6,030,000

[a] Refers to Disabling Illness—Illness that kept the person from work, school or other usual occupation for at least seven consecutive days; or required hospitalization; or caused death.

[b] Chronic Illness—Refers here to illness causing symptoms for at least three months.

SOURCE: National Health Survey.

TABLE 3

DISABLING CHRONIC ILLNESS[a] IN RELATION TO AGE

National Health Survey Findings

Age	*Percentage of chronic illness*		*Rate of chronic illness per 1,000 population*	
	Disability 7 days under 1 year	*Disability full year*	*Disability 7 days under 1 year*	*Disability full year*
Under 15	8.6	5.5	12.6	2.4
15-24	8.0	7.0	15.9	4.1
25-64	64.0	57.5	43.4	11.6
65 and over	19.4	30.0	120.5	55.5
All ages	100.0	100.0	35.5	10.5

[a] Disabling Chronic Illness—Refers here to illness causing symptoms for three months or more and causing disability for at least seven consecutive days.

SOURCE: National Health Survey.

NOTES AND REFERENCES FOR TABLES DERIVED FROM THE NATIONAL HEALTH SURVEY

TABLE 1 (1) Rates for specific disabling illnesses and all disabling illnesses (chronic and acute)—computed from R. H. Britten, S. D. Collins, J. S. Fitzgerald; The National Health Survey—*Some General Findings as to Disease, Accidents and Impairments in Urban Areas;* Public Health Reports; Vol. 35, No. 11; Reprint No. 2143; Table 1, p. 2; Table 2, p. 6; Table 11, p. 17.

(2) Rates for all disabling chronic illness—computed from New York State Health Preparedness Commission; *A Program for Care of the Chronically Ill;* Legislative Document No. 69, 1947; Table 10, p. 46. This publication gave age-specific rates adjusted to exclude tuberculosis and mental disease based on previously unpublished material from The National Health Survey. These rates were applied to the age distribution of the population covered in The National Health Survey as shown in above reference (1), Appendix A, p. 23. The New York state publication also reported on an analysis of the duplication of chronic illnesses affecting the same person (p. 45).

(3) Population base for application of rates to California—estimate of 9,876,000 given by Bureau of the Census Release, p. 25—No. 4.

TABLE 2 (4) Rates for specific disabling illnesses and all disabling illnesses—same as (1) above. Days of disability have been converted to weeks of disability.

(5) Rates for all disabling chronic illness—same as (2) above. Since the New York state publication did not show disability rates per illness on an age-specific basis, the rates are estimates based on the ratio of illnesses per 1,000 population in New York State to illnesses per 1,000 population in The National Health Survey.

TABLE 3 (6) Same as (2) above.

APPENDIX B

SERVICES AND FACILITIES FOR THE CHRONICALLY ILL

SUMMARY

County boards of supervisors have responsibility for providing hospital and medical care for the indigent population, including the chronically ill indigents. Provision is made for them through the County Welfare Department or County Hospitals or both. A survey in 16 California counties, completed June 15, 1948, indicated that care is generally available in county hospitals for chronically ill welfare clients during acute episodes. These patients, once hospitalized, however, are retained long after hospital care is needed because of the shortage of nursing homes, the high cost of nursing home care, and the lack of adequate home care services.

In California there is a State Hospital Program, organized along regional lines, which is to include the planning and construction of chronic disease hospital facilities. The need for these facilities in the State is illustrated by the data from the State Hospital Survey abstracted below:

Total estimated need chronic hospital beds	19,210 [a]
All chronic hospital beds (number of beds)	
Acceptable	3,434
Nonacceptable	1,848
Total	5,282
County chronic hospital beds (number of beds)	
Acceptable	3,434
Nonacceptable	1,756
Total	5,190
Non-county chronic hospital beds (number of beds)	
Acceptable	--
Nonacceptable	92
Total	92

With respect to facilities other than hospitals (e.g., nursing homes and custodial institutions) and with respect to services for the chronically ill, there is no overall state program. There are agencies in California concerned in one way or another with certain aspects of care for varying segments of the population.

The California Department of Public Health, which is responsible for licensure and inspection of nursing homes, reported that as of August 12, 1948, there were 360 nursing homes licensed in the State with a total bed capacity of 7,308. All of these homes are privately operated and

[a] This estimate is based on the ratio of two beds per 1,000 population—the ratio used in the Federal Hospital Survey and Construction Act, Public Law 725, 1946. It will be noted that this estimate, i.e. 19,210 beds, obtained by applying the ratio to the estimated July 1, 1947, California population (9,605,000) is higher than the figures in the March, 1948, publication "Hospital Facilities in California," where an earlier population estimate was used.

reports from county welfare directors and hospital administrators indicate that the rates are prohibitive for many persons needing such care. Tabulations from the 1947 State Hospital Survey disclosed that in county institutions approximately 3,000 custodial beds were used for domiciliary, ambulatory indigents, many of whom were aged persons. The California Department of Social Welfare licenses private homes for the aged which had a total bed capacity of approximately 5,000 as of May 1947.

For the industrially employed population of the State several agencies offer certain benefits affecting chronic illness. The Industrial Accident Commission of the California Department of Industrial Relations provides workmen's compensation (cash benefits and medical care) to those injured as a result of employment. The California Disability Insurance Program administered by the State Department of Employment provides partial compensation (cash benefits) for wage loss due to nonoccupational diseases and injuries. The Bureau of Vocational Rehabilitation of the California Department of Education offers medical care and other rehabilitation services to a limited number of chronically disabled persons (for the most part, those in urban areas) who are potentially employable. Several voluntary health insurance and prepayment plans offer medical care and hospital benefits, but usually these do not cover long-term illnesses and in many cases specifically exclude certain chronic conditions.

The U.S. Veteran's Administration provides extensive medical care and rehabilitation services for veterans who have service-connected disabilities and for other veterans who cannot afford the costs of medical and related services. Under the Federal Old Age and Survivors' Insurance Program and under the Federal Railroad Retirement Program cash benefits are provided to tens of thousands of persons in California—many of whom are chronically ill.

Through the Crippled Children's Service of the California Department of Public Health, medical care is provided for orthopedic and other physical defects among children under the age of 21 years whose parents are unable to finance such care "in whole or in part."

For chronically ill persons living at home, visiting nurse services under voluntary auspices are available in the larger urban areas of the State; such services have not been extended to the rural areas. The problems of licensure, training and supervision involved in utilizing practical nurses for bedside services in the home have not been solved. Visiting housekeeping services, which would assist many persons with chronic illness in remaining at home, are almost totally lacking in California.

Voluntary health agencies (including the American Red Cross, the California Tuberculosis and Health Association, the California Heart Association, the Cancer Commission of the California Medical Association, the California Division of the American Cancer Society, the California Society for Crippled Children, and the California Chapters of the National Foundation for Infantile Paralysis) have initiated educational and service programs which contribute to the care of certain segments of the chronically ill population. Certain religious groups and fraternal orders provide institutional care and other benefits to their members, especially the aged.

One may note that, in spite of the multiplicity of agencies involved, there are deficiencies in California with respect to a program for the chronically ill particularly in institutional facilities and home care services. In general these deficiencies are much more serious in the rural areas.

Probably the most critical lack of all is in preventive service, such as those developed by the medical profession, health departments and health agencies in the fields of tuberculosis and venereal disease control. *Planning for the Chronically Ill*, a joint statement by the American Medical Association, American Hospital Association, American Public Welfare Association and American Public Health Associations, recommends:

> "The basic approach to chronic disease must be preventive. Otherwise the problems created by chronic diseases will grow larger with time, and the hope of any substantial decline in their incidence and severity will be postponed for many years . . ."
>
> "In the past, the approach to chronic illness has been primarily concerned with institutional care for advanced stages of disease. There is need for a new orientation which places major emphasis on the early stages of chronic illness with a view to preventing or at least delaying the progress of the disease process."

California as yet has no state-wide program for the prevention of the chronic illnesses under consideration in the present investigation.

APPENDIX B-1

SURVEY OF SERVICES AND FACILITIES FOR CHRONICALLY ILL WELFARE CLIENTS IN 16 CALIFORNIA COUNTIES

As part of the chronic disease investigation, the State Department of Social Welfare conducted a survey of services and facilities available to chronically ill welfare clients in 16 California counties.

In meeting responsibility for licensing boarding homes and institutions and for the supervision of the administration of public assistance programs serving 240,000 individuals,[1] problems in relation to planning for the chronically ill have frequently been brought to the department's attention. Public assistance recipients receive a minimum grant of aid to provide for the usual day-to-day expenses. Medical care services are provided them through the county medical programs which vary between counties both as to availability of services and the types of services provided. Increased activity by local welfare departments in relation to planning for the chronically ill has been necessary in many counties and the department has long been interested in learning specifically what medical and hospital services and other related services were available to public assistance recipients suffering from chronic illness.

A schedule developed for use in conducting the survey contained questions covering the availability and methods of providing the various services and facilities, i.e., hospital care, nursing home care, medical and related services to welfare clients living at home or in substitute homes, convalescent and rehabilitation services, and community activities in the areas to administrative research and coordinated planning. Information was also secured on eligibility requirements for these services.

It was not administratively possible to survey all counties. A sample of 16 counties was selected on the basis of a random selection within the 10 regional groupings of counties established by the Governor's Interdepartment Research Committee. Los Angeles and San Diego Counties constitute separate regions and both counties were, therefore, included in the sample. The remaining counties surveyed were: Alameda, Inyo, Madera, Marin, Mendocino, Modoc, Monterey, San Joaquin, San Luis Obispo, Solano, Sonoma, Sutter, Tulare, Ventura. In 16 counties 148,523 persons are receiving assistance under the categorical aid programs; of this number, 120,019 persons are recipients of Old Age Security.

The surveys were made during the period April 15 through June 15, 1948, by the department's field representatives regularly assigned to the selected counties. Twelve field representatives conducted the surveys with four field representatives covering two counties each.

In two counties information for completion of the schedule was obtained only from the county welfare director; in the remaining 14 counties, the medical superintendent and/or hospital social service director were interviewed as well as the welfare director. In counties maintaining separate facilities for custodial and aged patients, the person in charge of the institution was interviewed in all counties with one exception. Additional persons were interviewed in some counties, for

[1] This number does not include recipients of general relief; the counties carry full responsibility for this program.

example, public health officers, representatives of councils of social agencies, personnel responsible for licensing boarding homes, staff members of welfare departments, etc. Information was obtained almost exclusively from interviews with persons listed above. From the information secured, it was not possible to determine the number of persons provided the various services or the action taken on referrals for these services.

ABSTRACT OF FINDINGS

Hospital Care

Care is available in general hospitals to chronically ill welfare clients in the 16 counties; in the two counties which do not maintain county hospitals, provision is made for care in private hospitals. At the time of the study there were no waiting lists for the admission of chronically ill patients. Six counties reported waiting periods were at times necessary for the admission of chronically ill patients.

Separate hospital facilities for long-term cases are maintained in the three metropolitan counties included in the survey; all of these facilities were filled to capacity or there were waiting lists for admission.

With one exception, chronically ill patients were retained in the hospital in all counties because of the lack of after-care services and facilities; in one metropolitan county the average waiting period for placement outside the general hospital was 76 days.

Nursing Home Care

There were no public nursing homes in the 16 counties selected for study. There were no private nursing homes in five of the 16 counties. The shortage of private nursing homes and the prohibitive costs practically eliminates consideration of this type of care for chronically ill welfare clients whose only income is public assistance.

The three metropolitan counties have extended county funds to meet the full cost of nursing home care or to supplement the assistance grant. However, the maximum amount allowed in two counties is not always sufficient to provide the type of care the client's physical condition requires; in one county no maximum has been established and county funds are provided in an amount necessary to procure the type of care required. In another county, public facilities are used rather than arranging placements in less expensive nursing homes where quality of service may be questioned. In two other counties funds would be provided for nursing home care but there are no nursing homes in the counties nor in nearby counties.

Eleven counties do not provide funds for nursing home care. In these counties only recipients with outside income can obtain this service.[1]

Physician's Services

General practitioner services are generally provided in hospital clinics and in physician's offices and in the home under certain circumstances.

General practitioner services are provided only in the county hospital clinic in four counties and, in three small counties in which clinics are not conducted, all services are provided in the physician's office or in the client's, or in the client's home. In one metropolitan county, general practitioner services are provided in the two hospital clinics and patients

[1] A study of 7,384 Old Age Security cases out of the total case load of 188,267 cases was made by the State Department of Social Welfare in June, 1948. This study shows that 53 percent of Old Age Security recipients have no outside income; 24 percent have outside income from $1 to $10; 10 percent have income from $11 to $20; 7 percent have income from $21 to $30; and the remaining 6 percent have income of $30 or more.

under the district medical program receive care in the physician's office or in the home. In addition to hospital clinic services provided in another metropolitan county, clients residing in the northern section of the county, at a distance from the county hospital, receive care in the physician's office or in the home. Physician's services are available in the four clinics serving different geographical areas in another large county and physician's services in the office or home are provided if the client is unable to attend the clinic. In the remaining six counties physician's services are provided in county hospital clinics and if the patient is unable to travel to the clinic, care may be given in the physician's office or in the home; in three of these counties physician's services are provided outside the clinic in emergency situations only and care is authorized and paid for by the welfare department.

There is no plan for providing specialist services in one county and in 11 counties specialist services not available in the counties are secured through private physicians in the county or through medical centers in metropolitan areas. In the remaining four counties, specialist services are available in the county hospital clinics and under the district medical program in a metropolitan county specialist's services are also provided in the physician's office or in the home.

Dental Care Services

In general, dental care services for adults are extremely limited. Twelve counties reported that provision is made only for emergency dental care or care determined necessary by the hospital physicians to meet health and nutritional needs. In three counties the types of dental services provided were not shown. In one county complete dental services are provided adults. In one-half of the counties studied, dental services are provided in county hospital clinics; in the other eight counties services are secured through private dentists and the welfare departments authorize and pay for care in six of these counties.

Bedside Nursing Services

In nine counties, bedside nursing care was not available in the home. In the other seven counties, visiting nurse associations provide home nursing services and several counties reported this service has been used extensively in the care of chronically ill welfare clients. In five of the seven counties, the visiting nurse associations served particular geographical areas and not the entire county. In four of the seven counties, bedside nursing services are paid for from county funds on the basis of the actual cost per visit and in the other three counties services are provided without charge.

Visiting Housekeeper Services

There were no visiting housekeeping services available in the 16 counties.

Medical Social Service

One or more qualified medical social case workers were employed in five counties.

Drugs and Appliances

Drugs are provided chronically ill welfare clients receiving care under county medical programs; usually, drugs are furnished through the county hospital pharmacy and if unavailable in the hospital supply, drugs are secured through local pharmacies. In three counties all drugs

are secured through local pharmacies. The welfare departments in seven counties meet the costs of drugs purchased from local pharmacies.

In only one county the provision of appliances was considered an essential part of the medical treatment plan. While provision was made for furnishing appliances in the other 15 counties, the extent to which they were provided was not determined. The welfare departments in eight of the 15 counties met the cost of appliances.

Vocational Rehabilitation Services

Vocational rehabilitation services are not available in three counties. In the remaining 13 counties services are provided through the State Bureau of Vocational Rehabilitation; with one exception all counties reported that services through the bureau were insufficient to meet the need. There were no private rehabilitation agencies in the 16 counties.

Recreational and Occupational Therapy Services

In the 16 counties, there were no organized recreational and occupational therapy services provided in the home.

Boarding Homes and Institutions

All counties reported an insufficient number of substitute home care facilities to meet the needs for this type of care. The need for additional boarding homes for aged was stressed by all counties. The cost of care in boarding homes and institutions is frequently prohibitive to welfare clients and only four counties supplement the assistance grant to provide this care.

Private institutions for aged are not always available to welfare clients because of long waiting lists, high rates, or restrictions on admissions.

Eligibility Requirements

It was not possible in all counties to obtain exact information on eligibility requirements because of the lack of clearly defined eligibility policies and differences in methods followed in determining eligibility for medical care.

Policies relating to eligibility for county medical care have been defined in six counties by a resolution of the board of supervisors, ordinances, or special committees. These policies have usually been stated in general terms; in only one of the six counties are the policies further defined for working purposes. In the remaining ten counties there are no written policies governing eligibility requirements.

In one-half of the counties, the hospital social service department has responsibility for determining eligibility for medical care and in the other eight counties the welfare departments carry this responsibility.

In seven counties all recipients of public assistance are automatically eligible for medical care and, in two additional counties, recipients of Aid to Needy Children and General Relief are automatically eligible but Old Age Security and Aid to Needy Blind recipients are eligible only if their resources are insufficient to meet the cost of private care. In the remaining seven counties, the receipt of public assistance does not qualify an individual for medical care and eligibility for this service must be established by investigation of the resources of the recipient and his responsible relatives.

In all counties applicants who are otherwise self-supporting are accepted for care under the county medical program if the applicants or their legally responsible relatives are unable to meet the cost of private medical care.

In some counties part-pay plans may be arranged for recipients of Old Age Security and Aid to Needy Blind recipients who have resources to meet part of the costs while in other counties part-pay plans are prohibited. Six counties reported that liens are required against real property owned by applicants for medical care. Several counties reported strict adherence to legal residence requirements in cases requiring long-term care.

Convalescent and Rehabilitation Services

Planned convalescent and rehabilitation services are available to a limited extent in only one county.

Research in the Field of Chronic Disease Services and Facilities

Efforts are being made in three counties to study some aspects of the problem.

Coordination of Services

There were no central planning or coordinating agencies concerned specifically with the chronic disease problem.

SUMMARY

Hospital care is generally available in county general hospitals for chronically ill welfare clients during acute episodes.[1] These cases once hospitalized, however, are retained long after hospital care is needed because of:

(1) Shortage of convalescent and nursing home facilities.
(2) High cost of convalescent and nursing home care where available.
(3) Lack of adequate services in the home.

In relation to adequate services in the home:

(1) General Practitioner Services—Usually provided in clinics and in the home or office in emergencies.

(2) Specialist Services—Usually provided in the physician's office when not available in hospital clinics.

(3) Dental Care Services—Limited to emergency care.

(4) Bedside Nursing Service—Provided in only seven of the 16 counties.

(5) Visiting Housekeeping Services—None.

(6) Medical Social Services — Medical Social Case Workers employed in only five of the 16 counties.

(7) Drugs and Appliances—Drugs are provided in all counties. Limitations are placed on the provision of appliances.

(8) Vocational Rehabilitation Services—Services are limited to those provided by the State Bureau of Vocational Rehabilitation.

(9) Recreational and Occupational Therapy Services—None.

(10) Boarding Homes and Institutions—Facilities are insufficient to meet the need for this type of care at rates the client can meet.

Planned convalescent and rehabilitation services are available to a limited extent in only one county.

Administrative research projects have been instituted in three counties.

There were no central planning or coordinating agencies concerned specifically with the chronic disease problem.

[1] This survey, as noted previously, was not designed to reveal information on the quality of hospital care available to chronically ill welfare clients.

APPENDIX B-2

HOSPITALS AND RELATED FACILITIES IN CALIFORNIA[1]

HOSPITAL FACILITIES

Tables 1 and 2 on the following page are based on data obtained from the Bureau of Hospitals, California Department of Public Health.

Table 1 shows the bed capacity of general hospitals grouped according to the hospital regions set up under the state hospital plan. Table 2 shows the bed capacity of chronic hospital facilities (including chronic wards and sections of general hospitals) grouped according to hospital region. Both tables also provide a comparison between existing facilities and estimated total needs.

For the first year (1947-1948) of the hospital construction program in California, priority was given to hospital beds for patients with acute illness. At its August 2, 1948 meeting, the California Hospital Advisory Council decided to extend the priority during 1948-1949 for beds for acute illness. At the same meeting the council began consideration of the needs in California for chronic disease, tuberculosis and children's hospitals. During the coming months the Bureau of Hospitals of the California Department of Public Health will be preparing a plan to include these categories in the remaining years of the five-year program.

---

[1] Including nursing homes, custodial facilities, institutions for alcoholics, and homes for the aged.

State agencies having jurisdiction over hospitals and related facilities are listed below:

The California Department of Public Health has responsibility over district hospitals and private hospitals, sanatoria, nursing, convalescent and rest homes, including any institution which maintains and operates organized facilities for the diagnosis, care and treatment of human illness, including convalescence. (Note exceptions: Institutions referred to in following paragraph.)

The California Department of Mental Hygiene has responsibility over institutions (hospitals, sanatoria, homes) or other places receiving or caring for mentally ill, allegedly mentally ill, or other incompetent persons, including the mentally deficient, alcoholics, drug addicts, and epileptics.

The California Department of Social Welfare has responsibility over county hospitals, and private boarding homes and institutions for the reception and care of aged persons.

TABLE 1

GENERAL HOSPITAL[1] BEDS IN COUNTY AND NON-COUNTY HOSPITALS BY HOSPITAL REGIONS: CALIFORNIA, JULY 1, 1948

(Data From State Hospital Plan Brought Up to Date by the California Department of Public Health, Bureau of Hospitals)

Hospital region	Area (Counties)	Population[2] (Estimated) as of July 1, 1947	Estimated need[3]	Bed capacity—existing facilities									Bed capacity—proposed construction[7]		
				All general hospital beds			County general hospital beds[4]			Non-county general hospital beds					
				Number of beds[6]			Number of beds[6]			Number of beds[6]			Number of beds		
				Total	Acceptable	Non-acceptable	Total	Acceptable	Non-acceptable	Total	Acceptable	Non-acceptable	Total	County hospital	Non-county hospital
I	Siskiyou, Trinity, Shasta, Modoc, northwest section of Lassen	80,800	297	249	129	120	113	90	23	136	39	97	74	74	------
II	Del Norte, Humboldt, northern part of Mendocino	62,800	291	337	201	136	142	126	16	195	75	120	14	--------	14
III	Tehama, Glenn, Butte, Plumas, and all Lassen except northwest section	110,800	353	479	253	226	200	108	92	279	145	134	--------	--------	--------
IV	Sutter, Yuba, Colusa, Sierra, Nevada, Placer, El Dorado, Amador, Yolo and Sacramento	382,100	1,583	1,404	1,148	256	618	571	47	786	577	209	47	--------	47
V	Sonoma, Napa, Lake, and southern part of Mendocino	169,400	639	642	327	315	207	154	53	435	173	262	235	22	213
VI	San Francisco, Marin, San Mateo, and Palo Alto, in Santa Clara County	1,137,600	6,294	5,414	5,116	298	1,582	1,582	--------	3,832	3,534	298	150	--------	150
VII	Alameda, Contra Costa, and Solano	1,136,800	4,418	2,572	2,241	331	651	480	171	1,921	1,761	160	70	--------	70
VIII	Santa Cruz; and Santa Clara, except Palo Alto	259,800	1,009	847	547	300	385	113	272	462	434	28	--------	--------	--------
IX	San Joaquin, Stanislaus, Merced, Calaveras, Tuolumne, and Mariposa	387,100	1,565	1,262	736	526	531	272	259	731	464	267	55	25	30

X	Fresno, Madera, Kings, and Tulare	440,300	1,671	1,309	1,005	304	619	521	98	690	484	206	135	135	----
XI	San Benito, and Monterey except southernmost section	110,400	419	367	358	9	140	140	----	227	218	9	17	----	17
XII	Santa Barbara, Ventura, San Luis Obispo, and southernmost part of Monterey	269,500	1,008	980	801	179	454	299	155	526	502	24	74	24	50
XIII	Mono, Inyo, Kern and northwest section of San Bernardino	190,500	834	767	656	111	376	370	6	391	286	105	61	30	31
XIV	Los Angeles and Orange	3,882,200	18,676	11,404	10,429	975	3,321	3,321	----	8,083	7,108	975	775	----	775
XV	Riverside and San Bernardino except northwest section	356,100	1,414	1,291	822	469	414	187	227	877	635	242	269	83	186
XVI	San Diego and Imperial	628,500	2,741	1,371	974	397	500	400	100	870	574	297	183	70	113
XVII	Alpine County with regional center at Reno, Nevada	300	10	----	----	----	----	----	----	----	----	----	----	----	----
	Totals, State-wide	9,605,000	43,222	30,695	25,743	4,952	10,253	8,734	1,519	20,442	17,009	3,433	2,159	463	1,696

[1] The U. S. Public Health Service defines a "General Hospital" as: "Any hospital for in-patient medical or surgical care of acute illness or injury and for obstetrics, of which not more than 50 percent of the total patient days during the year are customarily assignable to the following categories of cases: Chronic, convalescent and rest, drug and alcoholic, epileptic, mentally deficient, mental, nervous and mental, and tuberculosis."

[2] As estimated by the Population Committee of the California Department of Public Health. (Military personnel are not included in these estimates.)

[3] Basis: For State as a whole, 4.5 per 1,000 population. For areas comprising the regions within the State, the ratios vary (2.5 for rural areas, 4.0 for intermediate areas and 4.5 for base areas) with adjustments provided for in federal regulations under the Federal Hospital Survey and Construction Act, P. L. 725, 1946, Sec. 622 (A).

[4] Includes the few district hospitals, city hospitals and one state hospital (University of California Hospital in San Francisco.)

[5] Includes all private general hospitals e.g. church nonprofit association, corporation, partnership and individually owned hospitals. Federal hospitals are excluded.

[6] Definition of "nonacceptable" facilities:

1. Facilities which have not been granted fire clearance by the State Fire Marshal. (This group includes facilities which may be granted clearance upon satisfactory compliance with the recommendations of the State Fire Marshal.)
2. Facilities in buildings with or without fire clearance which contain specific structural conditions which make it impractical to repair or organize for the safety and welfare of the patient.

(A review of the facilities classified as nonacceptable shows that most of these facilities include aged buildings and those which provide inadequate and inefficient service. Specifically, these facilities will include:

A. Converted buildings,
B. No fire clearance,
C. Inadequate food storage and preparation facilities,
D. Inadequate sterilization and operation facilities,
E. Inadequate internal arrangement to facilitate movement of patients, either ambulatory or on stretcher especially in an emergency, or
F. Lack of proper exits.)

[7] Includes only those facilities for which final plans have been approved. Construction of these facilities is contemplated in the near future.

TABLE 2

CHRONIC HOSPITAL BEDS[1] IN COUNTY AND NON-COUNTY HOSPITALS, BY HOSPITAL REGION: CALIFORNIA, SEPTEMBER, 1947

(Data From State Hospital Plan, Prepared by the California Department of Public Health, Bureau of Hospitals)

Hospital region	Area (Counties)	Population[2] (Estimated) as of July 1, 1947	Total estimated need[3] chronic hospital beds	Bed capacity—existing facilities								
				All chronic hospital beds			County chronic hospital beds[4]			Non-county chronic hospital beds[5]		
				Number of beds[6]			Number of beds[6]			Number of beds[6]		
				Total	Acceptable	Non-acceptable	Total	Acceptable	Non-acceptable	Total	Acceptable	Non-acceptable
I	Siskiyou, Trinity, Shasta, Modoc, northwest section of Lassen	80,800	162	55	----	55	55	----	55	----	----	----
II	Del Norte, Humboldt, northern part of Mendocino	62,800	126	----	----	----	----	----	----	----	----	----
III	Tehama, Glenn, Butte, Plumas and all Lassen except northwest section	110,800	222	49	10	39	49	10	39	----	----	----
IV	Sutter, Yuba, Colusa, Sierra, Nevada, Placer, El Dorado, Amador, Yolo and Sacramento	382,100	764	213	60	153	213	60	153	----	----	----
V	Sonoma, Napa, Lake and southern part of Mendocino	169,400	339	179	----	179	179	----	179	----	----	----
VI	San Francisco, Marin, San Mateo and Palo Alto in Santa Clara	1,137,600	2,275	2,297	2,297	----	2,297	2,297	----	----	----	----
VII	Alameda, Contra Costa and Solano	1,136,800	2,273	832	64	768	832	64	768	----	----	----
VIII	Santa Cruz; and Santa Clara except Palo Alto	259,800	520	121	----	121	121	----	121	----	----	----
IX	San Joaquin, Stanislaus, Merced, Calaveras, Tuolumne, and Mariposa	387,100	774	265	----	265	265	----	265	----	----	----
X	Fresno, Madera, Kings and Tulare	440,300	881	152	26	126	152	26	126	----	----	----
XI	San Benito, and Monterey except southernmost portion	110,400	221	----	----	----	----	----	----	----	----	----

XII	Santa Barbara, Ventura, San Luis Obispo, and southernmost part of Monterey	269,500	539	50	-------	50	50	-------	50	-------	-------	-------
XIII	Mono, Inyo, Kern, and northwest section of San Bernardino	190,500	381	95	95	-------	95	95	-------	-------	-------	-------
XIV	Los Angeles and Orange	3,882,200	7,764	883	791	92	791	791	-------	92	-------	92
XV	Riverside, and San Bernardino except northwest section	356,100	712	91	91	-------	91	91	-------	-------	-------	-------
XVI	San Diego and Imperial	628,500	1,257	-------	-------	-------	-------	-------	-------	-------	-------	-------
XVII	Alpine County with regional center at Reno, Nevada	300	-------	-------	-------	-------	-------	-------	-------	-------	-------	-------
	Totals, State-wide	9,605,000	19,210	5,282	3,434	1,848	5,190	3,434	1,756	92	-------	92

[1] The U. S. Public Health Service defines a "Chronic Disease Hospital" as "A hospital, the primary purpose of which is medical treatment of chronic illness, including the degenerative diseases, and which furnishes hospital treatment and care, administered by or under the direction of persons licensed to practice medicine in the State."

The chronic beds listed in the above table include beds in chronic disease hospitals (i.e. Laguna Honda Home in San Francisco, Rancho Los Amigos in Los Angeles, and Fairmont Hospital in Alameda) and beds (in general hospitals) specifically assigned for the care of chronically ill patients, where the number of beds assigned in the individual general hospital is at least ten. It is probable that these facilities are utilized to some extent for cases requiring only custodial care, rather than true hospital care.

The above table does not include beds in tuberculosis and mental hospitals, in nursing homes, and in institutions set up primarily for the provision of domiciliary care. Similarly, the above table does not include custodial beds in county hospitals. (At the time of the State Hospital Survey in 1947, the total number of custodial beds in county hospitals was approximately 3,000.)

[The Bureau of Hospitals is planning to revise their data on chronic disease facilities when additional information becomes available. With respect to proposed construction of chronic facilities final plans have been approved for an addition of two wards (292 beds) to the Fairmont Hospital of Alameda County. Construction of this addition is expected to begin in the near future.]

[2] As estimated by the Population Committee of the California Department of Public Health. (Military personnel are not included in these estimates.)

[3] Basis: Two beds per 1,000 population. (Source: Federal Hospital Survey and Construction Act, P. L. 725, 1946, Sec. 622 (B)).

[4] For purposes of this table, district hospitals are included in the "County Hospital" category.

[5] Includes all private hospitals e.g. church, nonprofit association, corporation, partnership and individually owned hospitals. Federal hospitals are not included.

[6] Definition of "nonacceptable" facilities:

1. Facilities which have not been granted fire clearance by the State Fire Marshal. (This group includes facilities which may be granted clearance upon satisfactory compliance with the recommendations of the State Fire Marshal.
2. Facilities in buildings with or without fire clearance which contain specific structural conditions which make it impractical to repair or organize for the safety and welfare of the patient.

(A review of the facilities classified as nonacceptable shows that most of these facilities include aged buildings and those which provide inadequate and inefficient services. Specifically, these facilities will include:

A. Converted buildings,
B. No fire clearance,
C. Inadequate food storage and preparation facilities,
D. Inadequate sterilization and operation facilities,
E. Inadequate internal arrangement to facilitate movement of patients, either ambulatory or on stretcher especially in an emergency, or
F. Lack of proper exits.)

NURSING, CONVALESCENT AND REST HOMES

Table 3 presents a listing, by county, of the number of nursing, convalescent and rest homes licensed by the California Department of Public Health and the total bed capacity of these homes. These are all private institutions—there are no public nursing homes in California. (For custodial institutions, see the following section.)

TABLE 3

NURSING, CONVALESCENT, AND REST HOMES *

Licensed by the California Department of Public Health, Bureau of Hospitals: Data as of August 12, 1948

County	*Number of homes*	*Total bed capacity*	*County*	*Number of homes*	*Total bed capacity*
Alameda	46	712	Placer	1	25
Alpine	--	--	Plumas	--	--
Amador	--	--	Riverside	5	59
Butte	2	42	Sacramento	9	166
Calaveras	--	--	San Benito	--	--
Colusa	--	--	San Bernardino	11	145
Contra Costa	4	121	San Diego	16	339
Del Norte	--	--	San Francisco	31	327
El Dorado	--	--	San Joaquin	5	94
Fresno	10	165	San Luis Obispo	2	52
Glenn	--	--	San Mateo	6	227
Humboldt	3	73	Santa Barbara	6	96
Imperial	--	--	Santa Clara	16	327
Inyo	--	--	Santa Cruz	9	128
Kern	2	45	Shasta	--	--
Kings	--	--	Sierra	--	--
Lake	1	10	Siskiyou	--	--
Lassen	--	--	Solano	--	--
Los Angeles	146	3,793	Sonoma	6	68
Madera	--	--	Stanislaus	4	21
Marin	3	27	Sutter	1	3
Mariposa	--	--	Tehama	--	--
Mendocino	--	--	Trinity	--	--
Merced	--	--	Tulare	2	32
Modoc	--	--	Tuolumne	--	--
Mono	--	--	Ventura	1	7
Monterey	2	24	Yolo	1	34
Napa	4	35	Yuba	--	--
Nevada	1	7			
Orange	4	104	Total	360	7,308

* As defined in California Department of Public Health Regulations (California Administrative Code, Title 17, Section 196) "A nursing, convalescent or rest home is any place or institution which makes provision for bed care, or chronic or convalescent care, for one (1) or more nonrelated patients who, by reason of illness or physical infirmity, are unable to properly care for themselves."

CUSTODIAL FACILITIES

At the time of the 1947 State Hospital Survey, in schedules returned by county general hospitals a total of approximately 3,000 custodial beds were reported. These beds are used for domiciliary, ambulatory indigents, many of whom are aged persons.

HOMES FOR THE AGED

Private homes for the aged [1] are licensed by the California Department of Social Welfare. As of May, 1947, licensed homes for the aged had a total capacity of approximately 5,000 persons. There are no public homes for the aged in California, although, to some extent, custodial facilities in county hospitals are used for the indigent aged.

[1] These homes are limited by regulation to accept for care only ambulatory aged persons (65 years of age and older) in good physical and mental health.

APPENDIX B-3

NOTES ON BEDSIDE NURSING SERVICES IN CALIFORNIA[1]

COMMUNITIES IN WHICH BEDSIDE NURSING SERVICE IS PROVIDED

Bedside nursing service is available to patients in their homes in 26 communities in California. As shown in the following list of visiting nurse services, these agencies operate for the most part in urban areas.

VISITING NURSE SERVICES IN CALIFORNIA[2]

Alameda County—Berkeley Nursing Service, City Hall Annex, Berkeley; Oakland Visiting Nurse Association, 121 East 11th Street, Oakland.

Fresno County—American Red Cross Visiting Nurse Service, 2823 Fresno Street, Fresno.

Los Angeles County—Community Visiting Nurse Association, 511 Security Bank Building, Glendale; Long Beach Social Welfare League, 921 Pacific Avenue, Long Beach; Los Angeles Visiting Nurse Association, 2530 West Eighth Street, Los Angeles; Pasadena Visiting Nurse Association, 328 North Lake Avenue, Pasadena; Santa Monica Visiting Nurse Service, 1508 Sixth Street, Santa Monica.

Marin County—American Red Cross Visiting Nurse Service, 712 Fifth Street, San Rafael.

Nevada County—American Red Cross Visiting Nurse Service, P. O. Box 52, Grass Valley.

Orange County—Orange County Visiting Nurse Association, Santa Ana.

Riverside County—Riverside Visiting Nurse Association, 4328 Orange Street, Riverside.

Sacramento County—American Red Cross Visiting Nurse Service, 1300 G Street, Sacramento.

San Bernardino County—Redlands Visiting Nurse Association, 114 West Vine Street, Redlands.

San Diego County—San Diego Visiting Nurse Association, 737 17th Street, San Diego; Escondido Visiting Nurse Association, Escondido.

San Francisco County—San Francisco Visiting Nurse Association, 1636 Bush Street, San Francisco.

San Mateo County—American Red Cross Visiting Nurse Service, 224 Primrose Road, Burlingame.

Santa Barbara County—Santa Barbara Visiting Nurse Association, 133 East Raley Street, Santa Barbara.

Santa Clara County—San Jose Visiting Nurse Association, 74 South Second Street, San Jose.

---

[1] Abstract of material presented at the June 11th meeting of the Chronic Disease Advisory Committee by Miss Rena Haig, Chief, Bureau of Public Health Nursing, California Department of Public Health.

[2] Modified from *California's Health*, California Department of Public Health, November 30, 1947.

Santa Cruz County—Santa Cruz Visiting Nurse Service, American Red Cross, Santa Cruz.

Solano County—Vallejo Visiting Nurse Association, P. O. Box 312, Vallejo.

Sonoma County—American Red Cross Visiting Nurse Service, 14 Western Avenue, Petaluma; American Red Cross Visiting Nurse Service, 629½ Fourth Street, Santa Rosa.

Sutter-Yuba Counties—American Red Cross Sutter-Yuba Chapter Visiting Nurse Service, Marysville.

Ventura County—Ventura Visiting Nurse Association, Chamber of Commerce Office, 474 East Santa Clara Street, Ventura.

BEDSIDE NURSING SERVICE FOR THE CHRONICALLY ILL

Information in regard to bedside nursing service provided to chronic patients during the calendar year 1947 was obtained from the following agencies:

	Total visits made	*Visits to chronic patients*	*Percentage of visits to chronic cases*
Oakland Visiting Nurse Association	23,105	2,921	13
San Francisco Visiting Nurse Association	19,714	5,940	30
San Mateo Visiting Nurse Association	17,079	8,487	50

SOURCES OF FUNDS FOR VISITING NURSE SERVICES

Sources of funds for visiting nurse services are listed below:

1. The sponsoring agency (usually the Community Chest or the American Red Cross).

2. Insurance companies: Payments on a fee-per-visit basis.

3. Cancer societies: Payments on a fee basis or payment of nursing salaries.

4. City or county on contract with the visiting nurse association on the basis of fee per visit. For example, San Francisco pays the Visiting Nurse Association the cost per visit for patients referred by the City Hospital or by public health nurses. The total amount for this service allowed by the city during 1947 was $4,250. Old age pensioners are not paid for by the city if they are under the care of a private physician. This problem of care for the indigent chronic is serious and is increasing.

(The fee charged by a visiting nurse association is usually established on the basis of a cost study. It varies in different communities from $1.75 to $2.50. Care is given for less than the full cost of the visit or free of charge, depending upon the patient's financial situation.)

5. Gifts.

PLANNING FOR NURSING CARE

Care should be planned and provided on the basis of the nursing functions to be performed and the type of personnel required to perform those functions. Some cases should be cared for by public health nurses, some by registered nurses, others by practical nurses under supervision, and others by members of the family with instruction by the public health nurse. American Red Cross home nursing classes for home-makers are available in most communities in California.

TRAINING OF PRACTICAL NURSES

Courses for trained attendants are offered at the following hospitals in California:

Fairmount Hospital	San Leandro
Herrick Memorial	Berkeley
Seaside Hospital	Long Beach

The League of Nursing Education is working with the Pasadena Junior College to develop a course for practical nurses. Provision for practical experience will be made at one or more hospitals.

The Northern California League of Nursing Education and the Adult Education Department of the San Francisco City Schools are cooperating in the development of a course for practical nurses. It is expected that the instructor and facilities for the course will be provided by the Adult Education Department in September 1948. Provision will be made for practical experience in one or more hospitals in San Francisco.

MEETING THE NEED FOR BEDSIDE NURSING CARE

Planning for nursing care for the chronically ill in their homes should be a part of community planning to meet all of the problems concerned with care of these patients.

The amount of nursing service required for the chronically ill at home depends on many factors including the following:

1. Available hospital and nursing home facilities for the care of acute and chronic patients.
2. Types of cases cared for at home.
3. Economic status of the population in a community.

Developments in public health nursing services which may be required to meet the need in California are:

1. Expansion and increased budgets of existing visiting nurse services.
2. Establishment of bedside nursing services in communities where such service is not now available.
3. The development of bedside nursing service by health departments for all types of patients, including the chronically ill.
4. The employment of trained, licensed, practical nurses to supplement public health and graduate nurse services.

APPENDIX B-4

VOCATIONAL REHABILITATION SERVICES IN CALIFORNIA

The following report of vocational rehabilitation services in California outlines briefly the program of the Bureau of Vocational Rehabilitation, State Department of Education. The bureau provided the information for the report.

1. Date of Information

June-August, 1948.

2. Name and Address of Agency

California State Department of Education, Bureau of Vocational Rehabilitation, Sacramento, California.

3. Name and Title of Director of Agency

Harry D. Hicker, Chief, Bureau of Vocational Rehabilitation.

4. Type of Agency and Sponsorship

State agency.

4a. Source of Funds: The bureau's activities are financed by federal and state funds. The Federal Office of Vocational Rehabilitation pays all administrative expenses (and vocational guidance and placement costs) and 50 percent of case service costs; the State pays the remaining 50 percent of case service costs.

Total expenditures for the Fiscal Year 1947-1948 were as follows:

Item	*Amount*	*Source of funds*	
Case service costs (including examination, treatment, hospitalization, physical and occupational therapy, training, etc.)	$771,000	State	$385,500
		Federal	$385,500
Vocational guidance and placement costs	766,522	Federal	
Administrative costs *	154,137	Federal	
Total Expenditures	$1,691,659		

* Administrative costs include salaries and travel for central office staff and district supervisors, rent, utilities, and supplies.

Appropriations for the Fiscal Year 1948-1949 are given below:

Item	*Amount*	*Source of funds*	
Case service costs	$1,370,000	State	$685,000
		Federal	$685,000
Vocational guidance and placement costs	717,053	Federal	
Administrative costs	159,773	Federal	
Total Expenditures	$2,246,826		

5. Area or Jurisdiction Served by Agency

State-wide.

5a. District and Branch Offices: Services of the bureau are provided through six district offices and seven branch offices. The areas served by each of the district offices, the location of district and branch offices, and the size of professional staff as of August 1, 1948, are given below:

Office *	*Size of professional staff* †	*Area served by district offices*
District Office		Del Norte, Humboldt, Trinity, Mendocino, Lake, Sonoma, Napa, Marin, San Francisco, San Mateo, Santa Clara, Santa Cruz, San Benito, Monterey, Fresno, Kings, Tulare, Madera, Mariposa, Merced.
San Francisco	21	
Branch Office		
Fresno	3	
Santa Rosa	1	
District Office		Solano, Contra Costa, Alameda.
Oakland	13	
District Office		Siskiyou, Modoc, Shasta, Lassen, Tehama, Plumas, Glenn, Butte, Sierra, Colusa, Sutter, Yuba, Nevada, Yolo, Placer, El Dorado, Sacramento, Amador, San Joaquin, Calaveras, Stanislaus, Tuolumne, Alpine.
Sacramento	6	
Branch Office		
Chico	1	
Stockton	2	
District Office		San Luis Obispo, Santa Barbara, Ventura, Kern, San Bernardino, Riverside, part of Los Angeles County, Inyô, Mono.
Pasadena	10	
Branch Office		
San Bernardino	2	
District Office		Los Angeles (city).
Los Angeles	34	
District Office		Orange, San Diego, part of Los Angeles County, Imperial.
Long Beach	9	
Branch Office		
San Diego	6	
Santa Ana	1	

The present system of district offices was established in July of 1947. Prior to that time, there were three offices (San Francisco, Sacramento and Los Angeles) and several branch offices. The establishment of additional offices in 1947 followed a Department of Finance administrative survey which recommended this action.

It is significant to note that there are only nine professional employees serving a total of 23 counties comprising the Sacramento District and only 25 professional employees serving a total of 20 counties comprising the San Francisco District. Similarly the Pasadena District serves a very large geographical area with only 12 professional workers. With this distribution of offices and personnel, it would seem to be clear that large areas in the State—the predominantly rural areas—cannot possibly be covered adequately by the Bureau of Vocational Rehabilitation.

* In addition to district and branch offices, there are eight local offices which are set up primarily to refer high school children to district and branch offices. Each of these local offices is staffed by a vocational rehabilitation coordinator who is an employee of a group of school districts. The central office, or headquarters of the bureau, at Sacramento has a professional staff of four persons.

† Professional personnel include vocational rehabilitation officers, district supervisors, assistant district supervisors, and medical consultants.

6. Agency's Current Program

6a. Duration of Program: The California Vocational Rehabilitation Act, passed in 1921, accepted the provisions of the Federal Vocational Rehabilitation Act passed by Congress in 1920, and appropriated $35,000 per year for rehabilitation service. Prior to 1943, the program was limited to vocational guidance, training, prosthesis, and placement activities. In 1943, Congress amended the Vocational Rehabilitation Act authorizing appropriations for physical restoration services, services for the mentally and emotionally handicapped, and removing the monetary ceiling on appropriations for vocational rehabilitation services.

There is no state legislation in California on vocational rehabilitation other than the original act (1921) authorizing participation in the federal program.

6b. Specific Types of Services Provided: The following services are provided or purchased by the Bureau for the rehabilitation of vocationally handicapped persons:

Vocational guidance and counselling
Medical, psychiatric, dental, and psychological examinations
Medical, psychiatric, surgical, dental treatment
Hospitalization and convalescent home care
Nursing care
Physical and occupational therapy
Prostheses
Training
Transportation and maintenance grants
Placement (including occupational licenses, placement equipment, etc.)
Case follow-up.

A breakdown of the physical restoration case services purchased during the Fiscal Year 1947-1948 is shown below:

Type of service	*Number of clients receiving the service*	*Average cost per client*	*Total amount spent on service*
Medical, surgical, and dental examinations	6,670	$12 32	$82,814
Psychiatric examinations	150	24 74	3,710
Medical treatment	268	46 23	12,389
Psychiatric treatment	70	187 67	13,137
Surgical treatment	375	121 57	45,589
Dental treatment	96	126 87	12,200
Other treatment	7	136 71	957
Prostheses	820	101 18	82,979
Hospitalization	250	291 08	72,771
Convalescent home care	10	245 80	2,458
Physical therapy and occupational therapy	70	39 77	2,784
Transportation (for medical care)	90	23 21	2,089
Maintenance (for medical care)	70	164 04	11,483
Total			$345,360

The total amount ($345,360) paid for physical restoration case services (including examinations) represented approximately 20 percent of total program expenditures of the bureau during the Fiscal Year

1947-1948. During the same period, the bureau paid $364,595 for training and miscellaneous case services.

6c. Eligibility Requirements for Service or Benefits: The manual of the bureau prescribes the following eligibility and feasibility requirements for rehabilitation service:

Eligibility Requirements

(1) Age: Sixteen years of age or over.

(2) Disability: An established abnormal mental or physical condition.

(3) Handicap: An established hindrance to successful employment by reason of disability.

(4) Residence: One year residence in the State. However, persons who have resided in the State for less than one year and submit evidence of intention and ability to remain, may be deemed eligible. (No residence restriction for war disabled civilians or civilian employees of the United States.)

(5) Employment status: Unemployed, unsatisfactorily employed or likely to lose job.

Feasibility Requirements

(1) Age: Upper age limit is usually about 65, but contingent upon health and vitality of the individual. Work expectancy should be at least three years.

(2) Degree of Impairment: Applicant's physical condition must be such that he can carry on not only in training but also in employment on the job for which training is planned. Homebound cases may be feasible for service under the special program for the severely disabled. The criterion is a prognosis of ability to work sufficiently for complete or partial self-support. At least one-half of legal minimum wage should normally be anticipated.

(3) Mentality: He must be mentally capable of receiving instruction and be competent or potentially competent to manage his own affairs without constant supervision.

(4) Personality, Character and Family Situation: Emotionally stable or potentially so; able to get along with others; reasonable honesty, reliability, sobriety, and willingness to work. He must be free to devote his time and energies to the accomplishment of rehabilitation without undue economic or emotional strain.

(5) Facilities: Facilities for rendering the services required in the rehabilitation process must be available.

Stated negatively, such factors as old age, very low mentality, severe emotional or physical disability, extreme cosmetic difficulty, noncooperative attitude, habitual drunkenness, habitual moral or criminal turpitude, and similar factors which would make rehabilitation inadvisable, uneconomic, difficult, or impossible to accomplish, may be indicative of nonfeasibility for service.

In addition to the above eligibility and feasibility requirements, the provision of physical restoration services, as stated in the bureau's manual, is based on a number of factors including the following:

Basis for Providing Physical Restoration Services

Physical restoration is not intended to include restoration of every defect, but rather that portion necessary to make the client employable or more advantageously employable. Physical restoration service will be provided only when all of the following conditions prevail:

(1) Physical restoration may be provided only to disabled persons found to require financial assistance with respect thereto, after full consideration of the eligibility of such persons for any similar benefit by way of pension, compensation, insurance, or from any other agency as a matter of right as distinguished from privilege.

(2) Residence: The requirement is the same as for other rehabilitation services.

(3) Treatment is necessary for the satisfactory occupational adjustment of the applicant.

(4) The condition causing disability is static.

(5) The condition is of such a nature that treatment may be expected to eliminate, arrest, or substantially reduce the handicap it imposes within a reasonable time and for a reasonable cost.

(6) The prognosis for life and employability is favorable.

(7) There is on file a recent and adequate medical report and diagnosis, together with prognosis as to susceptibility to treatment and recommendations as to methods of restoration.

(8) The client understands that the treatment is provided primarily to make him employable and that he will diligently seek employment upon recovery either with or without training.

6d. Duration of Services or Benefits per Case: The policy of the bureau is to provide complete service once the determination of eligibility and feasibility is made. For the most part, there are no maximum limits on the duration of benefits or services. However, there are several factors which do limit the duration of certain benefits; e.g., hospitalization may not exceed 90 days unless special authorization is obtained; the maximum amount which can be paid to any one physician on any one case during any period of 12 consecutive months is $350; training is generally limited to a period not to exceed two years, but may be extended in appropriate cases.

The duration of services for closed cases (successfully rehabilitated [1]) during the Fiscal Year 1947-1948 is shown below:

Duration of services	*Number of closed cases (successfully rehabilitated)*	*Percentage of all closed cases (successfully rehabilitated)*
Under 2 months	153	3.5
2- 3 months	519	11.8
4- 5 months	607	13.8
6- 7 months	752	17.1
8- 9 months	665	15.1
10-11 months	360	8.2
12-17 months	165	3.8
18-23 months	454	10.3
24-35 months	388	8.6
36-47 months	264	6.0
48 and over	79	1.8
Totals	4,406	100.0

[1] A "successfully rehabilitated" person is one who is employed in a productive occupation suited to his abilities and who is earning at least one-half of the legal minimum wage (i.e., part-time employment).

Statistics are not readily available for duration of services provided to closed cases other than those successfully rehabilitated.

6c. Cost of Services: See 6b above and budget and expenditure figures in 4a above.

Case costs for closed cases (successfully rehabilitated) during Fiscal Year 1947-1948 are shown below:

Total cost per case	*Number of closed cases (successfully rehabilitated)*	*Percentage of all closed cases (successfully rehabilitated)*
Under $10 *	1,806	41.0
10- 49	824	18.7
50- 99	255	5.8
100-199	798	18.1
200-299	198	4.5
300-399	110	2.5
400-499	102	2.3
500-999	255	5.8
1,000 and over	58	1.3
Totals	4,406	100.0

* Cases in which medical examinations and job placement were the only services rendered.

Statistics are not readily available for case costs for closed cases other than those successfully rehabilitated.

Program cost per successful rehabilitation can be obtained by relating total program expenditures to the total number of successfully rehabilitated cases during the same period. For the year ending June 30, 1948, the program cost per successful rehabilitation was $383.94.

6f. Number and Types of Cases Receiving Services: The case load and closures during the fiscal year ending June 30, 1948, are shown in tabular form below:

CASE LOAD AS OF JUNE 30, 1948

Bureau of Vocational Rehabilitation, California Department of Education

Case service category (As of June 30, 1948)	*District*						
	San Francisco	*Oakland*	*Sacramento*	*Pasadena*	*Los Angeles*	*Long Beach*	*Total*
Referred status (client has applied for service or has been referred by another agency or person)	1,509	1,061	843	1,170	1,777	1,252	7,612
Accepted status (medical examination has been performed and client's eligibility has been established; feasibility is being determined for these clients)	1,110	573	477	496	970	712	4,338
Active ("rehabilitation") status (client is actually receiving rehabilitation services e.g. physical restoration, training, etc. This group constitutes the active case load of the bureau)	1,451	559	402	610	1,216	537	4,775
Total							16,725

CLOSURES DURING THE PERIOD JULY 1, 1947 TO JUNE 30, 1948

Bureau of Vocational Rehabilitation, California Department of Education

Case closed from "rehabilitation status" (employed and rehabilitated)	1,211	506	283	537	1,269	600	4,406
Case closed from "rehabilitation status" (unemployed or transferred to other agency)	118	45	50	10	45	43	311
Case closed from "accepted status" (closed because of indifference of client; increase in degree of disability; loss of contact, etc.)	233	133	186	128	395	120	1,195
Case closed from "referred status" (closed because services were declined; services not needed; applicants not eligible; applicant not cooperative; applicant needs services other than vocational rehabilitation, etc.)	1,051	486	660	524	2,176	1,531	6,428
Total							12,340

The bureau does not maintain statistics on the number of "closures from accepted status" and "closures from referred status," classified by reason for closure. Also, for these two categories which accounted for a total of 7,623 closed cases in the fiscal year ending June 30, 1948, information is not readily available on duration of services or types of services provided prior to closure. Were such statistics available, the preceding table on case-load and closures would be more meaningful.

Accurate and current information, on the number of handicapped persons of employable age in California, is not available. Also, information is not available on the number of such persons who are receiving services from agencies and sources other than the Bureau of Vocational Rehabilitation.

6g. Number and Type of Clients on Waiting List: Although the bureau does not maintain any "waiting list" as such, the "referred status" category may be considered as containing a large number of persons awaiting rehabilitation services. This category is made up of persons who have applied or been referred for service, and are being contacted and/or processed for eligibility. Information is not available on the number of each type of client in this "referred status" category.

6h. Coordination With Other Agencies and Organizations: (1) Source of Referrals: Sources of referrals for the six months period ending December 31, 1946, and for the equivalent period in 1947 are shown below:

Source of referral	*Percentage of all referrals July 1-Dec. 31 1946*	*July 1-Dec. 31 1947*
Educational agencies (principally public high schools, junior colleges, and colleges)	10.6	13.0
Health agencies	14.6	17.1
Insurance agencies (principally workmen's compensation)	17.3	12.1
Welfare agencies	11.3	8.2
Other government agencies (principally California State Employment Service)	21.6	25.8
Miscellaneous (including self-referred)	24.6	23.8*
	100.0	100.0
Total referrals	4,535	7,370

* Approximately half of this group (11.2%) is made up of self-referred cases.

The Bureau of Vocational Rehabilitation has entered into formal agreements with the following major agencies concerning: (1) Referral of cases, (2) exchange of information, and/or, (3) respective areas of jurisdiction:

a. California State Employment Service

b. California Department of Public Health, Crippled Children's Service

c. California Industrial Accident Commission

d. California Department of Social Welfare (Blind Cases)

e. State Personnel Board

Although these and other agencies refer cases to the bureau, apparently there are no referrals from one important source in the State—the California Department of Employment's Disability Insurance Program. This program, which began in December, 1946, pays cash benefits to eligible claimants for wage loss due to nonoccupational illnesses and injuries. Approximately three million workers in California are insured under the program.

(2) Committees and Councils: There are two committees which have been established to advise the chief of the Bureau of Vocational Rehabilitation: The Professional Advisory Committee and the California State Rehabilitation Council.

There is a third group—the California Council of Agencies for the Handicapped—in which the bureau participates as a member agency.

These groups, particularly the Professional Advisory Committee and the council, could furnish effective leadership in the coordination of services and facilities for the rehabilitation of the disabled and in the development of integrated programs. Concerning the representation on these committees and councils, it is of interest to note that employer groups are not well represented.

7. Describe Agency's Plans for New Programs or Extension of Current Programs

A. Rehabilitation Services in Rural Areas: In the present fiscal year (1948-1949) an increase in staff has been made to improve services

in the Fresno-Bakersfield area. Kern County now has a full-time rehabilitation officer. The Fresno-Merced-Visalia area now has a total of four rehabilitation officers whereas it previously had two. The 1949-1950 Budget contemplates the establishment of a district office for the Fresno-Bakersfield area and a full-time rehabilitation officer in the Humboldt County area.

B. Increased Services: For the current fiscal year, there has been a 55 percent increase in funds available for case services. This will make possible the provision of services to larger numbers of clients.

C. Rehabilitation Centers: There have been many plans for the establishment of rehabilitation centers and sheltered workshops throughout the State. Of perhaps most significance is a plan for establishing a comprehensive rehabilitation center as part of the new medical school at the University of California at Los Angeles. This school has a "rehabilitation minded" staff and has at least part of the necessary space and funds for the center. This plan also contemplates the establishment of a Department of Rehabilitation which will have the same status as the traditional departments e.g. medicine, surgery, etc.

8. Comments, Remarks, Suggestions

There are a number of important gaps in the present program of the Bureau of Vocational Rehabilitation.

A. Rehabilitation in rural areas of the State has lagged behind that in the urban areas. This weakness in the program is attributable to two major factors: (1) Lack of funds for rehabilitation personnel, and (2) lack of facilities and services in rural areas (e.g. medical specialist services, training facilities, accredited hospitals).

B. Rehabilitation personnel have been reluctant to accept for rehabilitation services severely handicapped persons (e.g. cerebral palsy cases) and persons with mental and emotional disorders. To some extent this reluctance is due to feasibility requirements (e.g. that a person be made employable within a reasonable length of time and at a reasonable cost). Lack of facilities, such as rehabilitation centers and sheltered workshops, has impeded the acceptance of some of these cases. Another factor, particularly true of the mental cases, is the fear that these persons will break down on the job and undermine the bureau's relationships with important employer contacts.

C. Statistical data maintained by the bureau is inadequate for program evaluation and program planning. Statistical services are financed by federal funds and are charged to administration. They are designed principally to furnish information for reports required by the Federal Office of Vocational Rehabilitation. They are not designed to provide current information on active cases (except those successfully rehabilitated) and on cases rejected for eligibility, feasibility, or other reasons.

APPENDIX B-5

THE CRIPPLED CHILDREN'S PROGRAM IN CALIFORNIA

The following report outlines briefly the Crippled Children's Program of the State Department of Public Health.

1. Date of Information

August 1, 1948.

2. Name and Address of Agency

California State Department of Public Health, Crippled Children's Services.

3. Name and Title of Director of Agency

Wilton L. Halverson, M.D., State Director of Public Health; Frederic M. Kriete, M.D., Chief, Bureau of Maternal and Child Health; Marcia Hays, M.D., Assistant Chief, Bureau of Maternal and Child Health.

4. Type of Agency and Sponsorship

State agency, acting in cooperation with federal and local agencies.

4a. Source of Funds—There are three sources of funds available to the program:

(1) Federal: In general, federal funds—allocated in accordance with the provisions of the Social Security Act—are budgeted for administrative costs.

(2) State: State funds are used to pay for all diagnostic services and all care to nonresident or transient crippled children. Also, where local appropriations are inadequate, subsidies are available from state funds to supplement local expenditures for care.

(3) Local: With respect to local funds, in accordance with the Crippled Children's Act, each county is required to appropriate an amount not less than one-tenth of a mill for assessed property valuation to finance services for crippled children.

5. Area or Jurisdiction Served by Agency

State-wide.

6. Agency's Current Program:

6a. Duration of Program—The original Crippled Children's Act in California dates back to 1927. It directed the State Department of Public Health to seek out handicapped children, to provide diagnostic services, and to furnish, upon certification by the Superior Court of each county, such services as were necessary for the treatment of handicapped children. The act further directed the counties to reimburse the State for the cost of such treatment, and authorized each county to appropriate three mills in each dollar of assessed valuation to pay for such costs.

In 1936, enabling legislation was passed to permit the acceptance of federal funds for the crippled children's program.

In 1945, the basic act was amended: (a) To direct each county to appropriate one-tenth of a mill of its assessed property valuation; (b) to

allocate such funds to either the county welfare department or the county health department to furnish services to handicapped children; and (c) to transfer the determination of financial need from the superior courts to the local administrative agency (welfare or health department). The law now provides that a county may authorize the State Department of Public Health to furnish necessary treatment services (with reimbursement by the county) or the county may provide the services independently, if the services meet the standards established by the State Department of Public Health.

Also in 1945, cerebral palsy and hearing conservation programs were authorized and funds were appropriated for these programs.

6b. Types of Services Provided—Services provided under the crippled children's program are:

Diagnosis by qualified specialists;
Treatment also by specialists;
Hospital care in approved hospitals;
Convalescent care in approved convalescent homes;
Appliances and other allied medical services, such as medical social services, physical therapy, nursing, etc.

All of the above services are provided by personnel meeting standards established by the state and federal governments. For physicians, certification or eligibility for certification by the specialty boards, and for other personnel, registration or certification by professional associations, are required.

The above services cover the following types of medical care:

Service	*Area covered*
General orthopedic	* State-wide
Plastic	* State-wide
Eye conditions leading to loss of vision	* State-wide
Other congenital anomalies	* State-wide
Rheumatic fever	Contra Costa, Humboldt, Merced, Sonoma, Stanislaus.
Hearing conservation	Alameda, Contra Costa, Humboldt, Kern, Los Angeles, Marin, Napa, Orange, San Bernardino, San Diego, San Francisco, San Mateo, Sacramento, Santa Barbara, Santa Clara, Solano, Sutter-Yuba, Ventura.

* The programs in Alameda, Los Angeles, Monterey, San Joaquin, Siskiyou, Sonoma and Tulare are independent. The specific extent and type of services provided in these counties are unknown.

An additional service which is offered by the program is planning for children who either reach the age of 21 and are no longer eligible for services or who are rejected either for medical or economic reasons. It is the responsibility of the agency to make plans for such childen elsewhere, either by referral to the State Bureau of Vocational Rehabilitation, by referral to other agencies which offer services, or by assisting in the planning for private medical care.

Table I below shows the number and types of services provided to children receiving care under the crippled children's program during the

Fiscal Year 1947-48 in counties which authorize the State Department of Public Health to purchase treatment services for them.

TABLE I

NUMBER AND TYPE OF SERVICES (EXCLUSIVE OF CLINICS) FOR CHILDREN RECEIVING CARE UNDER CRIPPLED CHILDREN'S PROGRAM IN DEPENDENT[a] COUNTIES

1947-1948 Fiscal Year

I.	Total number of cases for whom care was purchased from physicians, hospitals, and related providers of service (Fiscal Year 1947-1948)	3,856[b]
II.	Total number of cases by types of disabilities	
	A. Orthopedic	1,002
	B. Eye	1,096
	C. Plastic	739
	D. Ear	314
	E. Rheumatic fever	104
	F. Cerebral palsy	331
	G. Others[c]	372
III.	Types of payment by services	
	A. Diagnostic	1,534
	B. Medical care	2,050
	C. Hospital care	1,366
	D. Other[d]	1,842
IV.	Total number of in-patient hospital days for which payment was made 1947-1948 Fiscal Year	34,095

6c. Eligibility Requirements for Services—(1) Medical Eligibility. The following definition of a "physically handicapped child" is used for purposes of administration of the Crippled Children's Program:

> "A physically handicapped child is a person under 21 years of age who does not have complete use or control of his body or limbs because of physical defects resulting from *congenital anomalies or acquired through disease, accident or faulty development.* Children having the following handicapping conditions or suffering from a disease, which if not treated, is likely to lead to such handicapping are acceptable for care under the program:
>
> 1. Those of an orthopedic nature. Examples: Club foot, poliomyelitic paralysis, cerebral palsy, etc.
> 2. Those requiring plastic reconstruction. Examples: Cleft palate and lip, contracture or disfigurement due to burns, etc.
> 3. Those requiring orthodontic reconstruction. Examples: Dental-facial deformities accompanying cleft palate, etc.
> 4. Eye conditions leading to loss of vision. Examples: Cataract, strabismus, etc. (Ordinary refractive errors are excluded).
> 5. Ear conditions leading to loss of hearing. Examples: Chronic otitis media, chronic blockage of Eustachian tubes, congenital deafness, etc.

[a] "Dependent Counties" are those which authorize the State Department of Public Health to purchase treatment services for them (on a reimbursement basis).

[b] It is estimated that these 3,856 cases represent approximately 40 percent of all cases receiving services under the Crippled Children's Program.

[c] Includes cases diagnosed as poliomyelitis, congenital heart, congenital anomalies, cases requiring orthodontic treatment only, etc.

[d] Includes physiotherapy, appliances, anesthetic services, out-patient services, blood transfusions, etc.

6. Rheumatic or congenital heart disease.
7. Other disabling or disfiguring deformities. Examples: Extrophy of the bladder, severe hemangioma, etc."

(2) Financial Eligibility. The State Crippled Children's Act states that care is to be made available to children whose parents are unable to finance such care "in whole or in part." The determination of financial eligibility is made by the county agency designated by the Board of Supervisors.

Financial eligibility requirements apply to treatment services, not to diagnostic services.

6d. Duration of Services—Duration of services is not restricted under this program because of length or cost of treatment. The objective of the program is to achieve maximum correction for eligible children.

6e. Cost of Services—The total cost of services for the 3,856 cases referred to in Table I was $670,059; the average cost per case was $173.77. It is estimated that the 3,856 cases represents about 40 percent of all cases receiving services under the Crippled Children's Program. It is anticipated that additional statistical data on costs of services will be available within the next few months.

6f. Number and Types of Cases Receiving Services—See Table I above.

6g. Cooperation With Other Agencies and Organizations—The State program has four types of cooperative relationships:

(1) State-Federal. This involves relationships with the federal consultation services available through the regional office of the United States Children's Bureau.

(2) State-County. For counties which purchase their own treatment services for physically handicapped children, the State offers financial assistance and consultation services. For counties which authorize the State Department of Public Health to purchase treatment services for them, the department carries out these activities and the local agencies do the case-finding and follow-up work. The State finances diagnostic services in both of the above types of counties.

(3) Voluntary Agencies. There are three major voluntary agencies in the State concerned with the crippled children's program. These are the State Tuberculosis and Health Association, and its important subsection, the Heart Advisory Committee; the State Crippled Children's Society; and the National Foundation for Infantile Paralysis. Close working relationships have been worked out and established with these agencies. These relationships cover mainly, the fields of community organization, training and education, and legislation. All three agencies give active support through their local chapters to the crippled children services programs in county health and welfare departments. Special institutes, conducted for professional personnel, have been jointly planned and sponsored by state and voluntary agencies. Much of the published educational material released by the Crippled Children's Society and the Heart Advisory Committee is prepared jointly by the state and voluntary agencies.

(4) Other Official Agencies. Relationships with other official agencies are based on joint problems and activities. The State Department of Education and the State Department of Public Health have joint

responsibility in the cerebral palsy program; a coordinating committee meets regularly to plan and implement this program. The State Bureau of Vocational Rehabilitation and the Crippled Children Services have developed referral channels for individual cases and have developed and use a joint fee schedule for purchased medical and related services.

Other official relationships are with the State Department of Social Welfare, local county welfare departments, (particularly where these departments had been designated to administer the program as provided by law), and the State Department of Mental Hygiene.

7. Agency's Plans for New Programs or Extensions of Current Programs

No new programs are contemplated for the coming year.

In accordance with the general philosophy of the State Department of Public Health, the Crippled Children Services is encouraging the development of local administration of crippled children's programs and the development of local facilities and services essential for these programs.

Efforts are being directed towards the extension of special programs (i.e., cerebral palsy, hearing conservation, and rheumatic fever) to counties which do not now have coverage. The problems of funds and facilities for rheumatic fever and severely handicapped cerebral palsy patients, not now covered by the program, are being surveyed at the direction of the State Legislature. Survey results and recommendations will be considered at the next legislative session.

In the extension of these special programs, several factors are important:

Cerebral Palsy Program:

(1) Size of caseload of educable, treatable children with cerebral palsy.

(2) Availability of specialized personnel (orthopedic physical therapy, and special teaching).

Hearing Conservation Program:

(1) Availability of specialized personnel and facilities for diagnosis and treatment within the county or readily accessible to it. (Qualified otologists and approved hospitals.)

Rheumatic Fever Program:

(1) Availability of funds.

(2) Availability of special facilities and personnel. (The problem of rheumatic fever is largely one of adequate financing since costs of care for this disease far exceed those in the other categories covered by the Crippled Children's Program. The long term care necessitates not only adequate funds to cover length of care, but also convalescent facilities and trained personnel in the field of diagnosis and treatment.)

Continuous training of professional personnel in the basic crippled children's program and in the fields of cerebral palsy and rheumatic fever is in process. Federal funds are to be made available next year for a professional training center for cerebral palsy personnel. Negotiations are now being carried on which—it is hoped—will result in the establishment of this training center in California.

APPENDIX C

EXPERT OPINION

SUMMARY

During the period May to August 1948, letter questionnaires, asking for opinion information on the problems involved in caring for the chronically ill, were sent to the following persons in California:

Category	*Number of letter questionnaires mailed*
County welfare directors	58
County hospital administrators	53
Presidents of hospital councils and conferences	9
Presidents of county medical societies	40
Local health officers	68
Presidents of local osteopathic societies Osteopathic hospital administrators	94
Executives of voluntary welfare agencies	99

The letters sent to persons in each of the above categories were based upon a draft letter which was presented to the Chronic Disease Advisory Committee at its March 19th meeting. Revisions recommended by the members of the committee and revisions by the appropriate state associations were incorporated in the letter questionnaires.

A different type of letter than those referred to above was sent to each county grand jury foreman. These letters gave information about the chronic disease investigation, mentioned the letter questionnaires which had been sent to persons in each county, and asked for comments and suggestions.

In view of the differences among the questions in the several letter questionnaires, no attempt will be made to combine the tallies of answers from the several categories of persons.

The specific questions used in these letters, the number of replies received and detailed analyses of the responses are given in Appendix C-1 through C-7. A brief account of the opinions expressed in the letters of reply is presented below.

Problems in Caring for the Chronically Ill in California

There is general agreement among the respondents in all categories that the care of the chronically ill in their communities is a serious problem because of the:

(a) Difficulty in finding adequate nursing and convalescent homes for chronic cases;

(b) Lack of hospital facilities for chronic cases needing intensive medical care;

(c) Lack of adequate facilities for chronic cases needing a custodial type of care; and

(d) Lack of services, facilities, and trained personnel for the rehabilitation of the chronically ill.

On the last point (d) above, frequent mention was made of the program of the State Bureau of Vocational Rehabilitation, but it was pointed out that their services were inadequate or nonexistent in rural

areas and that there was no provision or little provision of services and facilities for rehabilitation other than vocational rehabilitation. In stressing the need for adequate nursing home facilities, attention was repeatedly called to the prohibitive costs of nursing home care and to the need for improvement in the quality of such care. The shortage of hospital facilities for chronic cases—reported emphatically by all groups —was frequently related to the general problem of shortages in all types of hospital facilities in the State. In addition to pointing out the need for additional custodial facilities, a number of respondents expressed serious concern about the poor condition of these facilities and the low standards of care prevailing in them.

All groups of respondents, except one, agreed that an important phase of the problem of caring for the chronically ill is the inability of families, otherwise self-supporting, to pay for medical and related services for their chronically ill members.

Opinions were divided among the groups of respondents as to the adequacy of: (1) Diagnostic services, (2) preventive medical services, and (3) coordination in the provision of all services for the chronically ill. This difference of opinion reflects, at least in part, the relatively adequate services in large urban areas in contrast to the inadequate services in rural areas. On the question of coordination, several respondents, referring to their own communities, pointed out that it is impossible to coordinate nonexistent services.

What Should Be Done Locally to Provide Adequate Service and Facilities for the Care and Rehabilitation of the Chronically Ill?

The letters of reply contained many recommendations on what should be done locally to provide adequate services and facilities for the chronically ill. The most frequently mentioned recommendation in the replies from respondents in each of the groups was for more and better hospital facilities and services. Some respondents stressed expansion of facilities; others stressed "improved," "better staffed," or "more accessible" facilities. Other recommendations for local action to meet the needs of the chronically ill include the following:

Provide additional nursing and convalescent homes
Provide or expand rehabilitation services
Provide bedside nursing and housekeeping services in the home
Coordinate local resources
Provide educational programs.

A few of the respondents stated that services in their areas were adequate. Several stated that small counties with inadequate funds cannot provide for the care and rehabilitation of the chronically ill.

Local Planning for the Care of the Chronically Ill

The questionnaires sent to all groups requested information on local planning for the care of the chronically ill. Some of the respondents answered that there was no planning in their county or community; others answered that they knew of no such planning. Of those who stated that their county or their community was engaged in planning in this field, most of them described plans for construction or expansion of

hospital and related facilities; a few described plans for integrating local facilities and services and a few stated that local health councils are becoming active in this field.

What Should the State Do to Help Localities Provide Adequate Services and Facilities for the Care and Rehabilitation of the Chronically Ill?

Many recommendations were offered on what the State should do to aid localities in this field. The recommendation mentioned most frequently in the letters of reply called for financial assistance to localities —financial assistance for construction of hospitals and related facilities for the care of the chronically ill. Other recommendations offered by a number of respondents include the following:

Expand rehabilitation services
Provide state subsidies to defray costs of service (including home care services) for the chronically ill
Develop or assist in the development of diagnostic clinics
Develop research centers and conduct research
Provide consultation services to counties
Establish standards for care
Recruit and train personnel or subsidize training of personnel
Conduct and expand health education programs
Expand and improve local health services.

A small number of respondents stated that this is a local problem —that the State should not help the localities to provide adequate services and facilities for the care and rehabilitation of the chronically ill.

What Aspects of the Chronic Disease Problem Deserve Special or Intensive Study?

The questionnaires asked for information on what aspects of the chronic disease problem deserve special or intensive study. Persons in each group were asked to answer this question from the standpoint of their own field of interest, e.g., as county welfare director, local health officer, county hospital administrator, etc.

The answers reveal a wide variety of subjects and problems suggested for special or intensive study. It is doubtful whether any significant phase of the chronic disease problem is omitted in the combined suggestions of the respondents.

The suggestions can be classified into two broad groups: (1) Those naming specific diseases requiring special or intensive study, and (2) those describing problems, common to a number of the chronic diseases, relating to the effects of these diseases on the individual and the community. In the latter group are many suggestions for studies of the need for services and facilities and of methods for providing adequate care for the chronically ill. A number of respondents stressed the need for developing preventive programs, additional and improved rehabilitation services, and adequate nursing home, convalescent home and custodial care programs. Several respondents called attention to the problem of financing care for the chronically ill and the need for studies of the economic factors in chronic illness. Housing, educational programs, personnel, home care services, and statistical studies were not ignored among the many suggestions offered.

Special Questions on Hospital Facilities for the Chronically Ill

Questionnaires sent to administrators of county general hospitals, to hospital conferences, and to executives of voluntary welfare agencies included the following special questions on hospital facilities:

"Should the following categories of patients needing hospitalization be cared for in the same hospital or in separate and independent facilities?

(a) Chronically ill adults and chronically ill children?
(b) Acute cases and chronic cases?
(c) Indigent chronic patients, and private chronic patients able to pay for their hospitalization?"

"Should hospital care for the chronically ill be centralized in one large facility in the community or should it be decentralized, i.e., provided in all general hospitals in the community?"

On the first of these questions, the county hospital administrators were divided in their opinions—some favored segregation through separate and independent facilities, others favored the use of the same hospital for the paired-off categories of patients. The executives of voluntary welfare agencies were predominantly in favor of the use of the same hospital, and were opposed to segregation. The hospital conferences were not clearly in favor of either position on this issue.

On the second of the above questions, more county hospital administrators were in favor of "centralization" than "decentralization." More of the executives of voluntary welfare agencies were in favor of "decentralization" than "centralization." Again, the hospital conferences were not clearly in favor of either position.

The apparent lack of agreement among the opinions of the respondents in these three groups could perhaps be resolved if questions were asked giving more details about the size and type of community to be served by these facilities.

9—L-8179

APPENDIX C-1

REPLIES TO LETTER QUESTIONNAIRES SENT TO COUNTY WELFARE DIRECTORS

On May 5, 1948, letter questionnaires were sent to all county welfare directors (58) and replies were received from 38 directors.[1]

The questions in the letter, tabulations of replies, sample answers, and brief summarizations are given below.

QUESTION 1

Figure A presents the tabulation of responses to each of the parts of Question 1.

FIGURE A

TALLY OF ANSWERS TO QUESTION 1

Total Replies: 38

1. Is the care of chronically ill welfare clients in your county a problem because of the following:

			*Qualified**	
	Yes	*No*	*Yes or No*	*No Answer*
a. Lack of diagnostic services to determine the exact condition of the patient and the type of treatment needed?	--	25	7	6
b. Lack of hospital facilities for chronic cases needing intensive medical care?	17	15	5	1
c. Difficulty in finding adequate nursing and convalescent homes for chronic cases?	30	2	4	2
d. Lack of adequate facilities for chronic cases needing a custodial type of care?	16	8	5	9
e. Lack of preventive medical services such as school health programs and health and maintenance programs for adults?	4	10	16	8
f. Lack of services, facilities, and trained personnel for the rehabilitation of the chronically ill?	19	4	7	8
g. Lack of coordination in the provision of services for the chronically ill?	7	14	2	15
h. Inability of families, otherwise self-supporting, to pay for medical and related services for their chronically ill members?	15	8	5	10

* "Qualified yes or no" is the classification used for the "yes, but" and the "no, but" answers and for other answers which are not clearly affirmative or negative.

QUESTION 2

2. "What do you think should be done locally to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

[1] *Counties from which replies were received:* Alpine, Amador, Butte, Colusa, Contra Costa, Del Norte, Fresno, Glenn, Humboldt, Inyo, Kern, Kings, Los Angeles, Mendocino, Merced, Mono, Napa, Nevada, Orange, Plumas, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Joaquin, San Luis Obispo, San Mateo, Santa Barbara, Santa Clara, Siskiyou, Sonoma, Stanislaus, Sutter, Tehama, Tuolumne, Yolo, Yuba.

This question was answered in 34 of the 38 letters of reply. The recommendations contained in these answers are tabulated and quoted below.

TABULATION

Recommendation	*Number of times mentioned*
Establish or expand county hospital facilities	12
Additional convalescent and nursing homes	8
Develop public subsidized convalescent and nursing homes	7
Provide hospital and clinic facilities for medical indigents where charges would be based on ability to pay	7
Provide bedside nursing and housekeeping services in the home	5
Formation or expansion of local health departments	5
Small counties with inadequate funds cannot provide for the care and rehabilitation of the chronically ill	4
Strengthening rehabilitation services	4
Added custodial facilities	4
Employ medical social case workers	3
Additional public health nurses	2
Coordinate and integrate medical and related services	2

The following recommendations appeared only once: Develop educational programs emphasizing early diagnosis and treatment; study the adequacy of present services and facilities for the care and rehabilitation of the chronically ill; adequate public assistance to provide the type of care required by the chronically ill welfare client; clarification of eligibility requirements for medical care; provide physician's services in the home; provide occupational and recreational therapy services in the home; visiting teachers for adults should be provided; provide services in the home community when the chronically ill person lives at a distance from the county hospital; additional trained staff for total chronic disease program.

Quotations From Answers to Question 2

1. "We should like to see the hospital enlarged to care for more patients because lack of beds, equipment and personnel have made it difficult at times. Our community is also in need of a health center. We would like to see this established and some planning by the State to help provide adequate services and facilities for the care of medical indigent and chronically ill persons."

2. "To expand local facilities for the chronically ill, the County Hospital needs to be reconditioned and enlarged. For lack of boarding homes for the aged, too much of its space is at times taken by aged women."

3. "It is our opinion that the problem would be lessened considerably with the establishment of a county hospital."

4. "There are several answers that could be given to this question. One is to develop a larger county hospital with some type of fee system which would permit the self-supporting individual to obtain adequate diagnostic services and medical care at a cost he could afford. The plan behind this would be both to prevent and, if possible, to arrest or cure chronic disease before the cost in loss of earnings, public assistance, medical care and hospitalization became too great."

5. "I believe the establishing of a county health program including all of the accepted features of a complete program would be a start

towards more adequate services for the chronically ill. It follows that a modern county hospital is needed to provide the intensive medical care required in individual cases."

6. "Develop subsidized nursing and convalescent homes where the rate of pay could be adjusted to the person's ability to pay and where recipients of public assistance could pay for their own care."

7. "I feel that as far as our local situation is concerned, the first need that should be met to provide adequate service and care for the rehabilitation of the chronically ill is the establishment of custodial and public nursing home services for such cases. The second step should be a strengthening of the services offered by our State Department of Rehabilitation so that more cases could be considered by that department. After these facilities and services were available, thought could be given to more perfect coordination of the various facilities."

8. "It is impossible for our small county with inadequate funds to provide for the care and rehabilitation of the chronically ill."

9. "Provide medical care of highest standard, coordinate and integrate medical services, provide services for the entire community and not for the indigent alone, rehabilitation to prevent dependency. Expansion and development of home care services, including visiting nursing services, housekeeping services, and adequate public assistance to provide the type of care required by the chronically ill welfare client."

10. "Additional private rest and convalescent homes are needed, as well as additional home service and public health nurses on the staff of our county health department. Arrangements for the providing of housekeepers should also be explored further, since no agency is providing such services in families not actually aided by that agency."

11. "Supplementary services covering housekeeping, nursing, home occupational or recreational therapy, visiting teachers for both school age and adult should be provided if persons are to be kept alert and self-reliant."

12. "Develop diagnostic clinics, particularly for cancer, diabetes, and cardiac conditions, where all laboratory facilities would be available, but where the charge would be on the basis of ability to pay."

QUESTION 3

3. "Is your county planning to do anything in this field?"

This question was answered in 29 letters of reply.

Yes	18
No	4
Not at present time	6
Plans unknown to welfare director	1

Quotations From Answers to Question 3

"YES"

1. "The expansion of county personnel is being taken care of by our board of supervisors. At the request of county departments a full time state rehabilitation worker will be provided after July 1st. Additional physical facilities, including beds and clinic space is being planned for our general hospital and in connection with hospital, branches located outside of county seat. The Council of Social Agencies is conducting a

complete survey of the health needs of the county and will in the coming year provide additional coordination facilities between public and private agencies."

2. "At the present time both a county health program and a new, modern, county hospital are under consideration."

3. "At the present time there is some discussion among the members of our county governing board regarding the advisability of entering into contracts with local private hospitals for the care of the indigent case. If this is done, better services will be available and much of the present difficulty of transportation will be eliminated."

4. "Plans are under way now for a new chronic and custodial section in the county hospital. The public health department is expanding and broadening its services in the field clinics."

5. "The county is planning to expand its hospital facilities and probably have some kind of rest home facilities in connection."

6. "The county is planning additional physical improvements and additions to present facilities. High cost of construction is undoubtedly a delaying factor."

QUESTION 4

4. "What do you think the State should do to help the localities to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

This question was answered in 29 letters of reply. The recommendations contained in these answers are tabulated and quoted below.

TABULATION

Recommendation	*Number of times mentioned*
Financial assistance to counties to provide services and to construct facilities (hospitals, nursing homes, custodial units)	17
Expand rehabilitation services	6
Develop diagnostic clinics	3
State subsidy to provide bedside nursing service in the home	3
Recruit and develop nursing and convalescent homes	3
Provide consultation services to counties	3
Develop research centers with clinical facilities	2
Provide facilities for chronically ill children	2
Expand health education programs	2
Establish adequate care standards	2

The following recommendations appeared only once: Develop uniform eligibility requirements for county medical care; work with the Federal Government to develop a plan which would permit recipients of public assistance to enter public institutions without discontinuance of assistance grant; analyze costs of various types of care for chronically ill; provide trained personnel; conduct studies to determine need for services and facilities; provide specialists services to rural areas.

Quotations From Answers to Question 4

1. "It is my belief that the State of California should share in all cases needing medical treatment or hospitalization where the patient is unable, financially, to pay for the services rendered. And this is particularly true when the patient is a transient or has not established residence

in the county. If something could be done about this problem, it would be much easier for the welfare director to get care for all persons who needed it and who are not financially able to take care of the cost."

2. "The State should bear a larger proportion of the cost of hospital care. Hospitalization for chronically ill old people is now assisted by the State only in those cases who have received old age assistance and then only in the maximum amount of $30 per month, whereas the cost of such cases' care is between $6 and $7 per day. The cost of the care of the chronically ill in these and other instances is becoming a very great burden upon the county's ability to finance."

3. "It is my belief that the State, through appropriate grants of aid and administration, could assist very materially the local political subdivisions so that adequate services and facilities for the care and rehabilitation of the chronically ill would be more readily available."

4. "We believe that there is a need for expanding the functions of the Bureau of Rehabilitation. At the present time they have two rehabilitation officers in this area, which in our opinion is not sufficient to take care of the large number of cases requiring rehabilitation."

5. "By the development of traveling clinics for diagnostic services, which clinics could be "rented" by the counties, it seems more people in the State would have a chance of discovering the onset of chronic illness. Particularly in rural areas, laboratory facilities are frequently not available to doctors. By the use of traveling clinics the local doctor would not have to refer the patient into a metropolitan center, with all its attendant expense, in order to avail himself of the best techniques."

6. "The State could well develop a program to find adequate nursing and convalescent homes for chronic cases. Inasmuch as the local county government could not license these types of homes, it would be well to stimulate such interest."

7. "I feel that the State should provide a more active consultation service to county physicians and welfare directors."

QUESTION 5

5. *"From a county welfare standpoint, what aspects of the chronic disease problem deserve special or intensive study?"*

This question was answered in 27 letters of reply. The recommendations contained in these answers are tabulated and quoted below.

TABULATION

Recommendation	*Number of times mentioned*
Study the need for services and facilities for the aged chronically ill and/or senile aged	10
Develop additional preventive programs	6
Rehabilitation	5
Need for adequate nursing home, convalescent and custodial facilities	4
Study methods for providing adequate care	3
Case finding surveys	3
Educational programs	3
Study the need for facilities for specific disease groups	3
Need for psychiatric clinics and beds	2
Study of the economic factors in chronic illness	2
Adequate housing	1
Uniform eligibility requirements	1

Quotations From Answers to Question 5

1. "From the viewpoint of the county welfare department one of our major problems is that of the care of the chronically ill, particularly the aged group."

2. "I feel from a county welfare standpoint, the care of the senile aged deserves special and intensive study. It is the most pressing current problem we have and is ever increasing."

3. "I believe the prevention of incapacity due to chronic illness is an aspect that warrants study."

4. "Broadening vocational rehabilitation services to include many cases not eligible under present system."

5. "An educational campaign is certainly indicated to convince the public that prevention or early diagnosis and cure is cheaper than long-time care."

6. "With respect to those cases directly affecting welfare departments, it would appear to me that special emphasis might be given to study methods of providing better nursing and convalescent and custodial type of care for those cases requiring such care."

7. "Welfare directors, physicians, and related professions, need to make sound practical studies on how best to treat, care for, and rehabilitate persons with chronic illnesses. In my opinion, there is not now sufficiently coordinated efforts on the part of the various individuals and agencies engaged in this problem."

8. "For chronically ill persons other than old people, methods of correlating our efforts at retraining and rehabilitating handicapped people."

9. "It is my feeling that emphasis should be placed upon the study of the inability of families to provide the necessary medical care for chronically ill, however, who are self-supporting otherwise. I feel there is a lack of realistic appreciation of the actual problem as it exists."

10. "It appears at the moment that one of the most useful tools that could emanate from a study would be the establishment of a reasonably uniform needs test which could be applied to applicants for assistance because of chronic illness."

11. "I believe that housing of the chronically ill is probably the most important problem. Many people are released from the hospital to the county welfare department. The county welfare department must place them in the best housing available which is dormitory care in the lower end of town. Food is provided for them through the local restaurants, and the amount of money given is not enough for them to select proper diet and I might add that most of the people would not know what a proper diet is and also the restaurants would not have it available. After a few days of this type of living and diet, they are ready to be patients for the county hospital again. If these people released from the hospital could have proper supervision in their eating and dwelling, I believe that the rehabilitation problem would be much more sensibly solved."

APPENDIX C-2

REPLIES TO LETTER QUESTIONNAIRES SENT TO COUNTY GENERAL HOSPITAL ADMINISTRATORS

On June 25, 1948, letter questionnaires were sent to each County General Hospital Administrator (53) in California. As of August 25th, replies have been received from 17 of these Administrators.[1]

The questions in the letter, tabulations of replies, sample answers and brief summarizations are given below.

QUESTION 1

Figure A presents the tabulation of responses to each of the parts of Question 1.

FIGURE A

TALLY* OF ANSWERS TO QUESTION 1

Total Replies: 17

1. Is the care of the chronically ill in your county a problem because of the following:

	Yes	No	Qualified† Yes or No	No Answer
a. Lack of diagnostic services to determine the exact condition of the patient and the type of treatment needed?	2	13	--	2
b. Lack of hospital facilities for chronic cases needing intensive medical care?	6	8	1	2
c. Difficulty in finding a sufficient number of nursing and convalescent homes for chronic cases?	13	2	--	2
d. Lack of adequate facilities for chronic cases needing a custodial type of care?	12	4	--	1
e. Lack of preventive medical services?	1	11	3	2
f. Lack of services, facilities, and trained personnel for the rehabilitation of the chronically ill?	9	1	4	3
g. Lack of coordination in the provision of services for the chronically ill?	6	7	1	3
h. Inability of families, otherwise self-supporting, to pay for medical and related services for their chronically ill members?	10	3	1	3

* A tally of answers by county is available for review by the committee.

† "Qualified yes or no" is the classification used for the "yes, but" and the "no, but" answers and for other answers which are not clearly affirmative or negative.

[1] *Counties from which replies were received:* Alameda, Humboldt, Lassen, Placer, Plumas, Riverside, Sacramento, San Bernardino, San Diego, San Francisco, San Luis Obispo, San Mateo, Santa Clara, Sonoma, Sutter, Tuolumne, Yolo.

QUESTION 2

2. "What do you think should be done locally to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

This question was answered in 12 of the 17 letters of reply. The opinions contained in these answers are tabulated, and sample quotations are given below:

Opinions *	*Number of times mentioned* *
Increase hospital facilities and services for care of the chronically ill	6
Expand rehabilitation program	2
Provide for physician services for home care cases	1
Provide additional housing facilities	1
Encourage medical interest in geriatrics	1
Old age security allotment be continued after admission to county hospital	1
Requires a state level type of service	1
Local services are adequate	2

* More than one opinion was expressed in several of the answers to this question.

Quotations From Answers to Question 2

"Local services adequate."

"Here at this hospital we have long seen the need for construction of a new chronic wing to get our chronically ill out of the fire traps in which they are now housed. All of the wards are crowded, and air conditions not good in some, to say nothing of the inflammable wooden building construction. The long-planned fireproof wing for chronics is delayed on purely financial grounds."

" * * * should be provided as integral part of services rendered by the acute general hospital."

"Emphasize rehabilitation and occupational therapy. Encourage medical interest in geriatrics. Perhaps create a residency in geriatrics in general hospitals."

QUESTION 3

3. "Is your community planning to do anything in this field?"

This question was answered in 14 of the letters of reply received. Of the 14 answers to the question, six stated "nothing" or "nothing definite" or "no progress visible"; two stated "don't know"; three replied that additional hospital facilities were being planned; of the remaining three answers, one stated that there was planning of housing facilities, another indicated that general interest had been aroused, and one stated: "much ado about nothing."

QUESTION 4

4. "What do you think the State should do to help the localities to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

This question was answered in 14 of the replies received. The opinions contained in these answers are tabulated, and sample quotations are given below:

Opinions *	*Number of times mentioned* *
Subsidize construction of hospital facilities for care of the chronically ill	2
Render financial assistance	2
Subsidy to defray cost of medical care for the chronically ill	1
Improve facilities and thereby elevate standards of medical care	1
Have separate state institutions for the chronically ill	1
State control or partial control of county hospitals	1
Provide funds for housing	1
The acceptance of state aid means the surrender of local independence	1
Establish uniform program of residence requirements for indigent aid	1
Initiate program of rehabilitation in the hospital and follow-up in nursing homes	1
Provide occupational therapists	1
Educate the public	1
Questionable whether state aid would help solve the problem	1
Exhaust possibilities of private industry coping with the problem	1

* More than one opinion was expressed in several of the answers to this question.

Quotations From Answers to Question 4

" * * * should attempt to improve and increase the facilities available for all types of cases, thereby elevating the standard of medical care and practice in the community, and this will be reflected in the care of the aged and chronic."

"It is highly questionable whether state aid to the localities would do much in solving the problem. It is even questionable in the mind of the undersigned whether state hospitals for the transient type individual would be of any benefit."

"Financial assistance by State—either in aiding with the construction problems or direct subsidizing to defray costs of medical care for the chronically ill."

" * * * financial assistance in construction phase and subsidy for rendition of care."

QUESTION 5

5. "From a county hospital administrator's standpoint, what aspects of the chronic disease problem deserve special or intensive study?"

This question was answered in 13 of the 17 replies received. The subjects mentioned in these answers are tabulated, and sample quotations are given below:

Subjects *	*Number of times mentioned* *
Specific diseases or conditions (including geriatrics)	
Alcoholism	2
Chronic arthritis	2
Asthmatic conditions	1
(Rheumatic fever, crippled persons, tuberculosis, cancer)	1
Geriatrics	1
Facilities for diagnosis and treatment	2
Problem of caring for transients who are chronically ill	1
Actual providing for sufficient beds	1
Results to be obtained by rendering more intensive and up-to-date care to the chronically ill	1
Develop more doctors and nurses primarily interested in the chronic conditions	1
Occupational therapy and specialized medical social service	1
Statistical studies	1

* More than one subject was mentioned in several of the answers to Question 5.

Quotations From Answers to Question 5

"Biggest problem in this community has always been alcoholism. Of those cases now residing in the county hospital as custodials (that is, individuals not requiring active care and residing here out of convenience or lack of other place to go) 100 percent have come to this stage through alcoholism. That is, the alcoholism did not, of course, induce the chronic disease but the continued drinking over many years resulted in a complete loss of self respect, initiative, and financial standing. This is also a problem with the acute case. For example out of 240 major fracture cases handled in 30 months, 92 percent were directly attributable to alcoholism. This number of fractures is greater than the combined total seen by all other practitioners in the county."

"The greatest problem in this county is the fact that a very large proportion of the chronically ill patients are transients with no legal residence and are thereby shunted from county to county until they become terminal cases. Further, patients of this type are not receptive to treatment even if it is offered them."

" * * * facilities for the diagnosis and treatment in this locality."

"(a) Rheumatic fever
(b) Crippled—both adults and children
(c) Tuberculosis
(d) Cancer
(e) Chronic arthritis."

QUESTION 6

Question 6 and a tally of the answers to it are given below:

6. "Should the following categories of patients needing hospitalization be cared for in the same hospital in separate and independent facilities?"

	Same hospital	*Independent facilities*	*Qualified answers*	*No answers*
a. Chronically ill adults and chronically ill children	7	4	3	3
b. Acute cases and chronic cases	6	6	2	3
c. Indigent chronic patients, and private chronic patients able to pay for their hospitalization	5	5	2	5

QUESTION 7

7. "Should hospital care for the chronically ill be centralized in one large facility in the community or should it be decentralized, i.e., provided in all general hospitals in the community?"

In answer to this question, eight of the respondents favored centralization; two favored decentralization; four gave qualified answers; and three did not answer the question.

APPENDIX C-3

REPLIES TO LETTER QUESTIONNAIRES SENT TO HOSPITAL CONFERENCES

On June 25, 1948, letter questionnaires were sent to each of the nine Hospital Conferences in California. As of August 25, replies were received from six of the nine Conferences.[1]

The questions in the letter, tabulations of replies, sample answers and brief summarizations are given below:

QUESTION 1

Figure A presents the tabulation of responses to each of the parts of Question 1. Sample answers to the several parts of this question are shown immediately following Figure A.

FIGURE A

TALLY* OF ANSWERS TO QUESTION 1

Total Replies: 6

1. Is the care of the chronically ill (who are not in the indigent category) in the area served by your conference a problem because of the following:

			Qualified†	
	Yes	*No*	*Yes or No*	*No Answer*
a. Lack of diagnostic services to determine the exact condition of the patient and the type of treatment needed?	1	4	1	--
b. Lack of hospital facilities for chronic cases needing intensive medical care?	4	--	2	--
c. Difficulty in finding a sufficient number of nursing and convalescent homes for chronic cases?	5	--	1	--
d. Lack of adequate facilities for chronic cases needing a custodial type of care?	5	--	1	--
e. Lack of preventive medical services?	1	1	4	--
f. Lack of services, facilities, and trained personnel for the rehabilitation of the chronically ill?	3	1	2	--
g. Lack of coordination in the provision of services for the chronically ill?	4	--	2	--
h. Inability of families, otherwise self-supporting, to pay for medical and related services for their chronically ill members?	6	--	--	--

* A tally of answers showing the replies of each of the Hospital Conferences is available for review by the committee.

† "Qualified yes or no" is the classification used for the "yes, but" and the "no, but" answers and for other answers which are not clearly affirmative or negative.

[1] Replies were received from the following conferences: *Central Coast Hospital Conference* (Area covered: Santa Clara, Santa Cruz, San Benito, San Maeto, and Monterey); *North San Joaquin Valley Hospital Conference* (Area covered: San Joaquin, Merced, Stanislaus, Calaveras, Tuolumne, and Mariposa; *Redwood Empire Hospital Conference* (Area covered: Mendocino, Sonoma, Marin, Napa, and Lake); *East Bay Hospital Conference* (Area covered: Alameda and Contra Costa); *San Francisco Hospital Conference* (Area covered: San Francisco); *San Diego Hospital Council* (Area covered: San Diego County).

QUESTION 2

2. "What do you think should be done locally to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

The answers to this question in the six letters of reply are quoted below:

"This council has set as its goal the complete integration of all the hospital facilities in the county. The small rural hospitals will channel their more serious cases to the larger city medical centers. Chronic cases who may be rehabilitated will be released to approved nursing or convalescent homes where rehabilitations will be carried out, still under the direction of the original physicians in the case."

"Suggest county or state aid or both to help defray costs in private hospitals and nursing homes."

"* * * more and better health facilities, chronic hospitals, and convalescent and nursing homes."

"* * * space and facilities be made available in general hospitals."

"Provide chronic care facilities. Provide personnel to care for patients in the newly provided institutions. Provide funds with which to construct new facilities, train personnel and meet part of the cost of operating these facilities. Provide funds with which to offer home care for selected chronic care cases."

"* * * should provide adequate chronic beds which should be associated closely with the acute general hospital whether it be voluntary or county. All chronically ill patients cannot be sent to the county hospital. The voluntary hospital should assume its rightful share of these."

QUESTION 3

3. "Are the communities in your area planning to do anything in this field?"

Of the answers to this question in the six letters of reply, two stated "No"; one stated "Yes" and another gave "?" as answer; one stated that "a portion of the area is planning to improve facilities—the rest are not"; and one stated that the council is planning "the complete integration of all hospital facilities in the county."

QUESTION 4

4. "What do you think the State should do to help the localities to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

The anwsers to this question in the six letters of reply are quoted below:

"We feel the State should exert its efforts to the implementation of the Public Health Nurse program, urging local health departments to expand preventative medical functions, and continue such studies as this."

"Suggest county or state aid or both to help defray costs in private hospitals and nursing homes. State help for low-income bracket patients in manner similar to E.M.I.C."

"* * * the State should aid the counties financially and otherwise to provide adequate facilities."

"* * * State subsidies same as T.B."

"Provide chronic care facilities. Provide personnel to care for patients in the newly provided institutions. Provide funds with which to construct new facilities, train personnel and meet part of the cost of operating these facilities."

"* * * should furnish grants-in-aid not only to the county hospitals, but to the voluntary hospitals so that the over-centralization of chronically ill patients is not fostered and to convalescent homes."

QUESTION 5

5. "From the hospital conferences' standpoint, what aspects of the chronic disease problem deserve special or intensive study?"

The answers to this question in the six letters of reply are quoted below:

"1st—Preventive Medical Service. 2nd—Rehabilitation."

"Care for the chronically ill in low income brackets."

"* * * scope of services, location of centers and method of financing."

"* * * terminal cases."

"Chronic care facilities. Home care."

"* * * study the number of patients who are suffering from disease both within and without the hospital."

"These can best be determined it would seem on a basis of study of the actual diseases and the deaths as reported in vital statistics."

QUESTION 6

6. "Should the following categories of patients needing hospitalization be cared for in the same hospital or in separate and independent facilities?"

A tally of the answers to question 6 are given below:

	Same hospital	*Independent facilities*	*Qualified answers*	*No answer*
a. Chronically ill adults and chronically ill children	3	2	1	–
b. Acute cases and chronic cases	3	1	2	–
c. Indigent chronic patients, and private chronic patients able to pay for their hospitalization	1	2	3	–

QUESTION 7

7. "Should hospital care for the chronically ill be centralized in one large facility in the community or should it be decentralized, i.e., provided in all general hospitals in the community?"

Of the answers to this question in the six letters of reply, two favored decentralization; one favored centralization; and three gave qualified answers.

APPENDIX C-4

REPLIES TO LETTER QUESTIONNAIRES SENT TO PRESIDENTS OF COUNTY MEDICAL SOCIETIES

On June 23, 1948, letter questionnaires were sent to the presidents of county medical societies (40) in California. As of September 10, replies have been received from 10 of the county medical society presidents.[1]

The questions in the letter, tabulations of replies, sample answers and brief summarizations are given below:

QUESTIONS 1 AND 2

Questions 1 and 2, and the replies to these questions, are given below:

1. "Is there a problem with respect to the care of the chronically ill in your county?"	*2. "If so, what do you believe is the origin of the problem?"*
"There is no specific problem as to the care of the chronically ill in this county."	———
"There is a definite problem regarding adequate domiciliary care and nursing for the chronically ill."	"Restrictive building codes, hampering regulations regarding the operation of convalescent homes, and prohibitive building costs are combining to prevent an increase of facilities commensurate with the growth of (this area)."
"Yes"[2]	No specific answer[2]
"There is a definite problem with respect to the care of the chronically ill in (this) county."	"This problem is largely the result of inadequate facilities for the care of this class of patients. The rapid growth of the community is also adding to the strain on the existing, inadequate facilities."
"Yes"	"Inadequate facilities—rapid increase in community growth."
"Yes"[2]	Facilities[2]
"Yes"	"Increased longevity."
"Yes"	"Lack of facilities."
"Yes"[2]	Inadequate hospitalization, inadequate housing.[2]
"Yes"	"Lack of facilities and coordination."

[1] Counties from which replies had been received: Alameda, San Francisco, San Diego, Sacramento, Santa Clara, Santa Barbara, Sonoma, and Riverside. Two replies gave no identifying information from which the county could be determined.

[2] Entries based on context of the letters of reply.

QUESTION 3

Figure A presents the tabulation of responses to each of the parts of Question 3, which is a continuation of Questions 1 and 2.

FIGURE A

TALLY* OF ANSWERS TO QUESTION 3

Total Replies: 10

For purposes of continuity, Questions 1 and 2 are repeated here: *1. "Is there a problem with respect to the care of the chronically ill in your county?" 2. "If so, what do you believe is the origin of the problem?"*

3. Does it concern any of the following

	Yes	*No*	*Qualified† Yes or No*	*No Answer*
a. Inadequate diagnostic services to determine the condition of the patient and the type of treatment needed?	--	7	2	1
b. Lack of hospital facilities for chronic cases needing hospital care?	8	--	2	--
c. Difficulty in finding adequate nursing and convalescent homes for chronic cases?	8	1	--	1
d. Lack of adequate facilities for chronic cases needing a custodial type of care?	7	--	2	1
e. Services, facilities, and trained personnel for the rehabilitation of the chronically ill?	5	3	1	1
f. Lack of coordination in the provision of services for the chronically ill?	1	5	2	2
g. Inability or lack of desire of families, otherwise self-supporting to pay for services for their chronically ill members?	2‡	4	2	2

* A tally of answers by county is available for review by the Committee.

† "Qualified yes or no" is the classification used for the "yes, but" and the "no, but" answers and for other answers which are not clearly affirmative or negative.

‡ One reply stressed "lack of desire"; the other stressed "lack of ability to pay."

QUESTION 4

4. "What if anything do you think should be done locally in your county to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

This question was answered in each of the 10 letters of reply. The opinions contained in these answers are tabulated, and sample quotations are given below:

Opinions *	*Number of times mentioned* *
Better hospital facilities or expand hospital facilities	3
Expand county custodial facilities	2
County should make available more nursing and convalescent homes	2
Encourage private enterprise and philanthropy to provide adequate facilities	1
Adequate, low cost housing; housekeeper service; physio-therapy and occupational therapy for rehabilitation; medical supervision regardless of income	1
Sheltered housing program	1
Home for old folks	1
Handle alcoholics as chronically ill and treat them as patients	1
Encourage State to improve care of the insane	1

(See, also, opinion expressed in the first quotation below.)

* More than one opinion was expressed in several of the answers to this question.

Quotations From Answers to Question 4

"In this county under the committee on distribution of medical care a study is being made of part pay and modified pay schedules to take care of cases in which the cost of medical care is a definite factor and which are not eligible for county care. We shall have a definite plan in this field in the next month or six weeks."

"Stop discouraging private enterprise and philanthropy. Encourage private enterprise and philanthropy to provide adequate facilities for chronic cases of nonpsychiatric nature. Encourage state to improve care of the insane."

"Some things which could be done locally to take care of this problem are: Adequate low cost housing, housekeeper service, physio-therapy for physical rehabilitation and occupational therapy for occupational rehabilitation, also medical supervision regardless of income."

"The provision of hospital and convalescent beds in our community would be the greatest aid to provide adequate services and facilities for the care of the chronically ill. An attempt, sponsored by county medical society, is geing made to have these facilities increased."

"We all recognize the need for a 'home' for old people where they do not lose their self-respect and interest in life. Even those of us in the medical profession know how difficult it is to care for our own parents in our own home and yet how many of us can afford $200 or $300 a month for their care?"

"The county should make available more nursing or convalescent homes to the chronically ill."

QUESTION 5

5. "Is your county planning anything in this field?"

This question was answered in each of the letters of reply received. Of the 10 answers to the question, seven stated or described the planning of facilities; one stated "an attempt is being made for closer coordination of facilities of State and county and different agencies and private physicians"; one stated "distant future"; and one answer was "no."

QUESTION 6

6. "Do you think the State should help the localities to provide adequate services and facilities for the care and rehabilitation of the chronically ill."

Opinions	*Number of times mentioned*
"No"	6
"Yes"	2
Qualified answers (see first two quotations below)	2

Quotations From Answers to Question 6

"If this is a problem of government, then of course we will have to expand the charity services to include those not indigent. If this is to be done, then further taxation will become necessary. If different parts of the State have a heavier load of this type of patient, then state aid should be given to those areas having an excessive load, so that the whole State will share."

"An attempt is being made for closer coordination of facilities of state and county and different agencies and private physicians."

"The State should not help the localities to provide adequate services and facilities for the care and rehabilitation of the chronically ill. It is our feeling that this is a problem that can be well cared for locally, and that the State should not enter into this place of the private practice of medicine."

"This county medical society does not believe that this problem is one belonging to the State and that at the present time it is being properly handled by local authority."

"I believe the State (or county) should build for three distinct types:

1. A place for those not too ill where men and women can be together, to carry on their hobbies (gardening, carpentry, knitting, etc.) or where they may even marry.
2. A place for those who are semi-invalids and who are at present in too expensive rest homes.
3. A place for the bedridden and ill who are custodial patients and would take the load off the mental hospitals and county hospitals."

"I think the county should take care of this problem."

QUESTION 7

7. "From the county medical society standpoint, what aspects, if any, of the chronic disease problem deserve special or intensive study?"

All replies to this question are quoted below:

"The problem of providing adequate care of chronic disease patients through the cooperation of private enterprise and the medical profession."

"Improvement in the care of the chronically ill will have to come with actual advances in medicine in the respective diseases. As these improved methods of care and treatment arrive, the county medical society should make every effort to have the information available to all its members. At the present time, while 80 percent of the care of the tuberculosis cases is being done under state, county, or federal agencies, I do not think that this method applies to the remaining group of chronic diseases."

"We feel that the financing of the construction of private hospitals and adequate nursing homes is a phase of the chronic disease problem which deserves special and intensive study."

"Finance private hospitals and adequate nursing homes."

"Tuberculosis."

"How to provide nursing and convalescent homes in small communities."

"Rates in nursing and convalescent homes are so high that many private patients are unable to afford care in these homes."

APPENDIX C-5

REPLIES TO LETTER QUESTIONNAIRES SENT TO LOCAL HEALTH OFFICERS

On July 5, 1948, letter questionnaires were sent to each County Health Officer (55) and to each full-time City Health Officer (13) in California. As of August 25, replies have been received from 14 county and six city health Officers.[1]

The questions in the letter, tabulations of replies, sample answers and brief summarizations are given below.

QUESTION 1

Figure A presents the tabulation of responses to each of the parts of Question 1.

FIGURE A

TALLY* OF ANSWERS TO QUESTION 1

Total Replies: 20

1. Is care of the chronically ill in your community a problem because of the following?

	Yes	No	Qualified† Yes or No	No Answer
a. Lack of diagnostic services to determine the exact condition of the patient and the type of treatment needed?	7	6	3	4
b. Lack of hospital facilities for chronic cases needing intensive medical care?	11	1	4	4
c. Difficulty in finding adequate nursing and convalescent homes for chronic cases?	16	--	1	3
d. Lack of adequate facilities for chronic cases needing a custodial type of care?	10	1	4	5
e. Lack of preventive medical services such as school health programs and health maintenance programs for adults?	5	6	3	6
f. Lack of services, facilities, and trained personnel for the rehabilitation of the chronically ill?	11	--	4	5
g. Lack of coordination in the provision of services for the chronically ill?	6	5	2	7
h. Inability of families, otherwise self-supporting, to pay for medical and related services for their chronically ill members?	10	1	3	6

* A tally of answers by county and city is available for review by the committee.

† "Qualified yes or no" is the classification used for the "yes, but" and the "no, but" answers and for other answers which are not clearly affirmative or negative.

[1] *Counties from which replies were received:* Alameda, Del Norte, Humboldt, Kings, Lassen, Monterey, Riverside, Sacramento, San Bernardino, San Francisco (city and county), San Luis Obispo, Solano (and Vallejo City), Sonoma and Sutter-Yuba (a bi-county health department). *Cities from which replies were received:* Alameda, Los Angeles, Oakland, Palo Alto, Pasadena, and Santa Barbara.

QUESTION 2

2. "What do you think should be done locally to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

The question was answered in 12 of the 20 letters of reply. The opinions contained in these answers are tabulated and some are quoted below:

TABULATION

Opinions *	*Number of times mentioned* *
Increase hospital facilities and services for care of chronically ill	5
Diagnostic services and facilities	3
Provide or expand rehabilitation program or services	3
Provide convalescent and custodial type of care	2
Establish a planning committee or health coordinating council	2
Provide additional housing facilities	2
Provide education and health maintenance programs for adults	2
Establish nursing and convalescent homes	1
Establish a system of consultants to advise physicians in nonmetropolitan areas	1
Greater promotion of health and hospital insurance	1

* More than one opinion was expressed in several of the letters.

Quotations From Answers to Question 2

"Locate the chronically ill persons and determine the type and extent of their disability."

"* * * more beds added and better diagnostic and laboratory facilities provided for the care of the chronically ill."

"* * * increase both private and public hospital facilities and services."

"In the expansion of the local hospital, special provision should be made for the care of chronic illness."

"Planning committee (possibly through welfare council) to study needs, recommend additions and to coordinate efforts that are interrelated to make existing facilities go farther."

"There should be a chronic disease wing on each of the local hospitals in the small centers.

These wings should be prepared for little more than custodial type of care. More intensive care and better diagnostic facilities should be established in connection with the Community Hospital as well as the County Hospital, and arrangements should be made with the specialized chronic disease hospital in connection with the medical school for still more extensive and specialized care.

A system of consultants should be set up to supply the physicians with advice.

There should be established a chain of convalescent or rest homes under state licensure and with adequate medical nursing direction. They should give primarily custodial care.

These convalescent homes and the small hospitals mentioned in above, should offer rehabilitation services. Of course all this requires trained social workers, occupational therapists, physio-therapists, nurses and money.

More promotion of health and hospital insurance might help in providing care for persons who are border-line as to finances.

There should be established rheumatic fever, tumor and similar clinics and an increased emphasis in case-finding in tuberculosis."

QUESTION 3

3. "Is your community planning to do anything in this field?"

This question was answered in 13 of the 20 letters of reply. Of the 13 answers, four stated "no community planning" or "the community is doing nothing in this field"; two stated that there was some community planning, but so far no results had been achieved; and five stated the community was planning the construction or expansion of hospital facilities. Of the remaining two answers, one stated the community was doing some planning in housing and the other stated that there was planning but did not identify the type.

QUESTION 4

4. "What do you think the State should do to help the localities to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

This question was answered in 15 of the 20 replies received. The opinions contained in these answers are tabulated and some are quoted below:

Opinions *	*Number of times mentioned* *
Subsidize construction of hospitals for care of the chronically ill	5
Subsidize training of personnel	4
Subsidy to defray cost of medical care for the chronically ill	2
Establish small convalescent centers as rehabilitation centers	2
Expand the Vocational Rehabilitation Program	1
Expand and improve local health services	1
Help in finance and advice	1
Supplement local plans for medical and hospital care and allied services, after consultation with local agencies and where local resources are inadequate	1
State should not become involved until there is definite knowledge of the need for this care	1
Depends upon one's political philosophy	1

* More than one opinion was expressed in several of the answers to this question.

Quotations From Answers to Question 4

"Whether the State should participate in assisting localities to finance projects depends, of course, upon one's political philosophy and whether one feels that local communities should solve their own problems, including the financial aspects, or whether we should look to the State to do this for them."

"It will probably be necessary for the State to provide a fairly heavy subsidy for construction of facilities for the care of the chronically ill."

"I think if the State could participate in hospital construction for the chronically ill it would give the greatest stimulus for better care of these people."

"Financial assistance by State—either in aiding with the construction problems or direct subsidizing to defray costs of medical care for the chronically ill."

"* * * expand its Vocational Rehabilitation Program to include Vocational Counseling and Occupational Therapy as well as Vocational Rehabilitation Services in the various communities.

The State might also consider offering training stipends in pathology to physicians in the hope that eventually some of them will filter out to the rural areas."

"Help in finance and advice."

QUESTION 5

5. "From a local health officer's standpoint, what aspects, if any, of the chronic disease problem deserve special or intensive study."

This question was answered in 11 of the 20 letters of replies received. Of the 11 answers, four listed specific diseases (chiefly, cancer, heart disease and mental disease); two stated that the preventive aspects of the chronic disease problem deserve special study; and the remaining five answers listed a variety of subjects for special study (e.g. facilities for diagnosis and treatment, housing, medical care, rehabilitation, the economic and social problems of the chronically ill).

Quotations From Answers to Question 5

"preventive medicine. The early diagnosis of tuberculosis in stages when it is more easily controllable prevents chronic disease. The early detection and diagnosis of rheumatic fever before the heart is damaged prevents chronic disease. The isolation of carriers of streptococcus and their treatment before further damage is done to the body prevent chronic disease, and this runs through the whole gamut of such processes of such diseases which leave crippling defects. We may say perhaps a little more—if we had a definite method of preventing poliomyelitis we could certainly avoid crippling defects. There are, however, other diseases which lead to chronicity regarding which it is questionable as to whether they fall in the field of public health, but are more in the nature of an individual problem of the patient himself and it would seem that perhaps these conditions could best be met by educating the American public to consult their physicians early and to have a periodic check-up. We might use the problem of diabetes as an example of this situation."

"the preventive aspects of the chronic disease problem"

"emphasis of mental hygiene, cancer, cardiac and circulatory diseases"

"Housing, medical care and rehabilitation."

"One of the major problems of chronic illness is economic. Many persons in the middle income class are deterred from seeking medical care because of inability to pay, despite the generosity of the

medical profession in furnishing a great deal of free service. I believe that it is well and proper for each individual to pay for his own care so far as possible but some protection against unusual and expensive illness is needed."

"Both the problem of chronic illness and the economic problem become more acute with old age. Although an increasing number are being protected by sickness insurance, such coverage usually ceases when the individual is no longer gainfully employed. Protection for the remaining years is needed."

"We are staffing our out-patient clinics with a public health nurse and feel that in this way we can find out what a great many of the problems are. I feel, from the health officer's standpoint, we are allowing a large group of useful citizens to feel that they have no place in community activity."

APPENDIX C-6

REPLIES TO LETTER QUESTIONNAIRES SENT TO PRESIDENTS OF LOCAL OSTEOPATHIC SOCIETIES AND ADMINISTRATORS OF OSTEOPATHIC HOSPITALS

On July 12, 1948, letter questionnaires were sent to presidents of local osteopathic societies and administrators of osteopathic hospitals. A total of 94 questionnaires were sent; 18 replies [1] were received as of August 25, 1948.

The questions in the letter, tabulations of replies, sample answers, and brief summarizations are given below:

QUESTION 1

Figure A presents the tabulation of answers to each of the parts of Question 1.

FIGURE A

TALLY* OF ANSWERS TO QUESTION 1

Total Replies: 18

1. Is the care of chronically ill in your community a problem because of the following:

	Yes	*No*	*Qualified† Yes or No*	*No Answer*
a. Lack of diagnostic services to determine the exact condition of the patient and the type of treatment needed?	6	8	--	4
b. Lack of hospital facilities for chronic cases needing intensive medical care?	13	2	--	3
c. Difficulty in finding adequate nursing and convalescent homes for chronic cases?	12	3	1	2
d. Lack of adequate facilities for chronic cases needing a custodial type of care?	12	4	--	2
e. Lack of preventive medical services such as school health programs and health maintenance programs for adults?	7	5	3	3
f. Lack of services, facilities, and trained personnel for the rehabilitation of the chronically ill?	14	2	1	1
g. Lack of coordination in the provision of services for the chronically ill?	8	4	1	5
h. Inability of families, otherwise self-supporting, to pay for medical and related services for their chronically ill members?	15	1	1	1

* A tally of answers by county is available for review by the committee.

† "Qualified yes or no" is the classification used for the "yes, but" and the "no, but" answers and for other answers which are not clearly affirmative or negative.

[1] *Replies were received from the following counties in California:* Kern, Los Angeles (6 replies), Orange, Riverside, San Bernardino, San Diego, Santa Barbara, Santa Clara, Santa Cruz, Tulare. One reply was received from the Redwood Empire area, and two replies gave no identifying information from which the county or area could be determined.

QUESTION 2

2. "What do you think should be done locally to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

This question was answered in 15 of the 18 letters of reply. The opinions expressed in these answers are tabulated, and sample quotations are given below:

Opinions	*Number of times mentioned*
Hospitals, clinics, nursing or convalescent homes	8
(These opinions in some instances specified state or federal assistance and in some instances stressed "accessible" and "better staffed" institutions.)	
State or federal aid for the chronically ill	2
Private physicians and surgeons (M.D. and D.O.) should contribute ½ day weekly to county service	1
Establish a sound national physical program	1
Nothing. We are well provided with many facilities	1
(See, also, first two quotations below.)	

Quotations From Answers to Question 2

"It seems to me that there are adequate facilities available. However, they are not available to the person who is a property owner and with a modest income. He can not afford private care and hospitalization over a long period, yet is not eligible or is too proud to use county aid.

I would prefer a decentralization of county hospital care with subsidy to private hospitals for care of those able to pay a portion of their fees."

"There were mixed opinions on this item. Some felt that nothing should be done, others felt that a clinic or institution for the care of chronic diseases would be ideal but possibly not practical. The private physicians see a possibility of more institutional treatment under such a set-up; less chronic disease in their offices."

"I do not believe much can be done in the local community to solve this problem and that care and rehabilitation of the chronically ill is going to have to come from aid by state or federal funds."

"To correct this, in our opinion, it will be necessary to have tax subsidized clinics, etc., set up to provide adequate services for the chronically ill."

"We are well provided with many facilities."

"Hospitals for all the people, backed by federal and state aid, financially."

"Adequate state or federal aid for chronically ill."

"More and more satisfactory rest homes."

QUESTION 3

3. "Is your community planning to do anything in this field?"

This question was answered in 13 of the 18 letters of reply. Of the 13 answers, three stated "no"; four stated "not to our knowledge" or

"not known"; one stated "yes." The remaining answers to this question are quoted below:

"To the best of our knowledge there is a county program of this type under way but progressing slowly. Our profession however, is not consulted and will not be included in any of this work. We feel that there should be some type of facilities made available to the osteopathic profession."

"Has made survey for hospital."

"* * * more financial relief."

"* * * agitation to revamp the county hospital—otherwise nothing."

"Nothing for the 'chronic,' as such. District and private hospitals are on the agenda."

QUESTION 4

4. "What do you think the State should do to help the localities to provide adequate services and facilities for the care and the rehabilitation of the chronically ill?"

This question was answered in 13 of the 18 letters of reply. The opinions expressed in these answers are tabulated, and sample quotations are given below:

Opinions	*Number of times mentioned* *
State (and federal) subsidies to or financial aid for construction of local hospital and clinics	6
Cooperate financially, with federal aid	2
Additional state or county hospitalization for chronically ill	1
Rest homes and less red tape in licensing rest homes	2
Initiate public health programs	1
Chiefly a local problem	1
Better cooperation, county and private (See, also, the first quotation below.)	1

* More than one opinion was expressed in several replies.

Quotations From Answers to Question 4

"At least bridge the gap and care for patients in the county less than a year who require care but are not eligible at general hospital short of one year's residence."

"I feel that if state or federal funds could be allocated to local hospitals to increase their facilities for this care that it seems the only logical solution to the problem."

"Chiefly a local problem."

"* * * for one thing—use more common sense in licensing rest homes and less red tape."

"* * * initiate public health programs."

"To correct this, in our opinion, it will be necessary to have tax subsidized clinics, etc., set up to provide adequate services for the chronically ill."

"Establish clinics with subsidies for existing hospitals and to aid in the construction of others."

QUESTION 5

5. "From the osteopathic physician and surgeon's standpoint, what aspects of the chronic disease problem deserve special or intensive study?"

This question was answered in 15 of the 18 letters of reply. Of the 15 answers, two stated "all aspects"; two stated "rehabilitation"; five stated "equal privileges for osteopaths in governmental institutions"—using this or similar language; others stated "more financial relief"; "arthritis and uremia—with modern facilities for handling same"; "relation of postural defects to visceral disease"; "arthritis and high blood pressure"; and "development of branches of preventive medicine and chronic medicine".

APPENDIX C-7

REPLIES TO LETTERS TO EXECUTIVES OF VOLUNTARY WELFARE AGENCIES

On July 26, 1948, letter-questionnaires were sent to the executives of 99 voluntary welfare agencies. Replies were received, as of September 8, from eight [1] health and welfare councils and from seven [2] community chests. One reply was received from a state voluntary health agency, but this has not been included in the tabulation.

The questions in the letter, tabulations of replies, sample answers and brief summarizations are given below:

QUESTION 1

"1. Please indicate the geographical area served by your agency or agencies."

Footnotes 1 and 2 indicate the areas served by the agencies from whom replies were received.

---

[1] East Bay Health Council; Santa Clara, Health Section of Council of Social Agencies; La Canada Valley Chest and Welfare Council; San Francisco, Health Council of Community Chest (this reply summarized questionnaires received from 11 member agencies); Chico Council of Social Agencies; San Diego Community Welfare Council; Long Beach Community Welfare Council; Santa Barbara Community Chest.

[2] Alhambra, Concord, Redlands Area, Monterey Peninsula, Vallejo, Napa, Washington Township (Centerville).

QUESTION 2

"2. In this area is the care of the chronically ill welfare clients a problem because of:"

	Councils				Community Chests				Total			
	Yes	*No*	*Qualified Yes or No*	*No answer*	*Yes*	*No*	*Qualified Yes or No*	*No answer*	*Yes*	*No*	*Qualified Yes or No*	*No answer*
"(a) Lack of diagnostic services to determine the exact condition of the patient and the type of treatment needed?	2	2	3	1	5	2	-	-	7	4	3	1
(b) Lack of hospital facilities for chronic cases needing intensive medical care?	4	-	4	-	5	1	1	-	9	1	5	-
(c) Difficulty in finding a sufficient number of nursing and convalescent homes for chronic cases?	5	-	2	1	7	-	-	-	12	-	2	1
(d) Lack of adequate facilities for chronic cases needing a custodial type of care?	5	-	3	1	5	-	1	-	10	-	4	1
(e) Lack of preventive medical services?	4	1	2	1	4	3	-	1	8	3	2	2
(f) Lack of services, facilities and trained personnel for the rehabilitation of the chronically ill?	5	-	1	2	4	-	2	1	9	-	3	3
(g) Lack of sufficient services to the patient in his own home, such as nursing services, housekeeper services, and casework services?	6	-	1	1	4	-	2	1	10	-	3	2
(h) Lack of coordination in the provision of services for the chronically ill?	6	-	1	1	5	1	-	1	11	1	1	2
(i) Inability of families, otherwise self-supporting, to pay for medical and related services for their chronically ill members?"	7	-	-	1	7	-	-	1	14	-	-	2

QUESTION 3

3. "What do you think should be done locally to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

This question was answered in 12 of the letters of reply received. In the 12 answers, the following suggestions were made the number of times indicated:

Expand hospital facilities	7
Coordinate resources	4
Establish or expand home nursing service	4
Establish more publicly financed services	3
Establish housekeeping service	3
Strengthen rehabilitation program	3
Study the problem locally	3
Establish custodial facility for elderly patients	2
Expand nursing home facilities	2
Establish medical social service	2
Initiate educational program	2
Establish preventive facilities	1
Establish a health department	1
Expand medical clinics	1
Improve transportation; case-finding; housing; home-care; occupational therapy; employment opportunities; relax residence requirements	1 each

QUESTION 4

4. "Is your community planning to do anything in field?"

This question was answered in 13 of the letters of reply received. These answers are summarized below:

Health councils becoming active in this field	4
No	4
Surveys recently completed	2
Yes	1
Hospital district being formed	1
New hospital eventually	1

QUESTION 5

5. "What do you think the State should do to help the localities to provide adequate services and facilities for the care and rehabilitation of the chronically ill?"

Among the 12 replies to this question, the following suggestions were made the number of times indicated:

Aid financially (non-specific)	7
Subsidize care	5
Financial assistance for facilities	3
Establish standards for care	3
Train personnel	2
Provide leadership	2
Conduct educational programs	2
Subsidize local preventive clinics	1
Expand facilities and services for psychotics	1
Establish housing program	1
Provide low-cost or free custodial care	1
Conduct research	1
Supply lists of specialists	1
Compel local areas to assist this group	1

QUESTION 6

6. "From a voluntary welfare agency executive's standpoint, what aspects of the chronic disease problem deserve special or intensive study?"

Among the 11 replies received, the following suggestions were made the number of times indicated:

Prevention	3
Financing	3
Rehabilitation	3
"All aspects"	2
Nursing homes	2
Custodial care	2
Alcoholism	2
"Actual care," housing, hospitalization, research, nursing care, psychological aspects of treatment, study, old age services, sheltered workshops, cancer clinics, and prepaid plan	1 each

QUESTION 7

7. "Should the following categories of patients needing hospitalization be cared for in the same hospital or in separate and independent facilities?"

	Same	*Separate and independent*	*Qualified yes or no*	*No answer*
(a) "Chronically ill adults and chronically ill children	9	1	2	3
(b) Acute cases and chronic cases	9	1	2	3
(c) Indigent chronic patients, and private chronic patients able to pay for their hospitalization	10	-	2	3

QUESTION 8

8. "Should hospital care for the chronically ill be centralized in one large facility in the community or should it be decentralized, i.e., provided in all general hospitals in the community?"

Centralized	2
Decentralized	6
Qualified (yes or no)	2
No answer	5

APPENDIX D

REPORTS OF TECHNICAL ADVISORY GROUPS

Technical Advisory Group Reports Are Attached
as Appendix D-1 Through Appendix D-6

APPENDIX D-1

THE CANCER PROBLEM IN CALIFORNIA AND RECOMMENDATIONS FOR A CANCER CONTROL PROGRAM

A Report Prepared by the Cancer Commission, California Medical Association

A. STATEMENT OF THE PROBLEM

1. How Cancer Affects the Public

In California, as in the United States as a whole, the magnitude of the cancer problem has increased steadily during the past several decades. As a cause of death, cancer is today second only to heart disease. In 1947 there were over 14,000 cancer deaths in California, and it can be estimated that approximately 50,000 persons with cancer were alive at some time during the year. For these patients and their families, cancer frequently means suffering and economic loss. For the community it means, often times, increased dependency and the loss of many persons in the productive years of life.

2. The Nature of Cancer (causes, prevention, methods of treatment, effectiveness of treatment)

Very little is known concerning the exact cause of most human cancer. There is a small limited field of occupational cancer where the disease is definitely known to follow exposure to sunlight, exposures to such chemicals as coal tar products, the inhalation of nickel and asbestos and to the exposure to radioactivity. The cause of such major cancers as stomach, intestine, breast and female genital organs has not been established. A relationship has been shown between cancer and chronic irritation and inflammatory conditions such as dental caries and inflammatory lesions of the uterine cervix, and these facts are important in the prevention of some cancer. Animal experimentation has shown that there are usually several different causes in any individual tumor and that there are as many kinds of cancer as there are kinds of human tissue.

The fact that cancer is essentially a multiplicity of diseases initiated by many and often interacting causes makes the problem of cancer control entirely different from that of tuberculosis and other infectious diseases where a single definite cause is known and where that cause can be controlled by sanitation or isolation. Cancer is not contagious or transmitted by contact and is not a hereditary characteristic. Hence the diagnosis of cancer is not subject to mass methods and the control of cancer is limited to the attack upon the lesion in the individual patient.

The prevention of cancer with our present knowledge includes public health measures in known occupational cancer and it includes the discovery and treatment of certain chronic inflammatory diseases that frequently precede cancer. With our present knowledge the treatment of cancer is limited to the actual physical destruction of the growth by surgical removal or by radiation with X-ray or radium before these lesions have spread from the original site of occurrence. That this treatment is effective in early cancer is demonstrated by clinical reports from

hospitals, clinics and individual physicians throughout the United States. These statistics show five-year cures in early lesions reach 95 percent in cancer of the skin and at least 75 percent in early cancer of the breast and uterus. Most early accessible cancer is curable by properly applied present methods.

Cancer seldom remains localized to its point of origin but spreads with varying rapidity locally or throughout the body where it becomes inaccessible or where it cannot be removed. Within a few weeks or months the curability of any case may drop 50 percent, and late cancer is usually incurable.

3. Barriers to Application of existing Knowledge (ignorance, lack of facilities, quacks, etc.)

It is estimated that 30 percent of the patients that now die of cancer could have been cured had they received effective treatment early when the lesion was discoverable. With our present knowledge the one weak spot in cancer control is the period of delay between the development of cancer and the effective treatment of the lesion.

This delay is largely due to ignorance, indifference or fear on the part of the public. The individual does not know the meaning or seriousness of abnormal symptoms and hesitates to seek advice from the physician. Frequently he attempts to cure himself with useless remedies or he seeks the services of an advertising irregular who promises a sure cure without surgery. When the cancer is discovered there is frequently delay in carrying out the physician's program because of a variety of reasons.

The recognition of early cancer is often difficult and may require consultation and special examinations. The failure to obtain such consultation and necessary examinations immediately may cause serious delay before a diagnosis is made and effective treatment is instituted. Many of our rural cities and counties do not have adequate specialists or hospital facilities in the county, and while these are available in adjacent counties, the fact that they are not easily available often adds to the delay in prompt diagnosis and treatment.

One cause for the delay in early diagnosis and immediate effective treatment arises from the lack of hospitalization for certain indigent groups. With our large immigration there is an increasing load of indigent cancer patients who are not entitled to care in tax supported hospitals because of residence.

4. Indication of How an Organized Program Would Reinforce the Services Performed by Individual Practitioners

The services performed by the individual private practitioner would be reinforced by a program organized to accomplish the purposes as set forth in the basic requirements, i.e.: (1) Statistical research; (2) education, both for the public and for the medical and allied professions; (3) encouragement and assistance in establishing and maintaining diagnostic and treatment clinics for indigent patients, and for support of consultative tumor boards for all patients; (4) provision of adequate hospital beds for the care of the patients with advanced cancer; and (5) services for those who desire or must of necessity be cared for at home.

The results obtained would include a broadening of the doctors' concept of cancer, and an appreciation of the difficulties in early diagnosis and of the relative values of the present known treatments. The physician would then come to accept the desirability of consultation similar to that in a tumor board to aid both him and his patient in obtaining the best treatment. He would be given an opportunity for continuing "post graduate" instruction in the progress of treating this disease. He would be furnished information concerning nature and prevalence of the disease, not only in the Nation or State, but in his own community. By the enhancement of hospital facilities when needed he would have a place in which to properly carry out his treatment. Finally, with adequate home services, the terminal case would be well cared for.

5. Indication of Likely Benefits of a Program in Terms of Ultimate Decrease in Community Costs and Improvement of the Public Health

The morbidity from advanced cancer usually extends over a considerable period of time involving continued disability and suffering for the patient and a large financial outlay for the family. Where the head of the family is involved this means complete loss of earning ability as well as large expense. The 14,000 deaths per year from cancer in California represents the disorganization of a substantial number of families over a long period of time with a consequent economic loss to the community and a burden upon the community in indigent cases. By conservative estimate at least 4,000 of these 14,000 patients each year could be cured through early diagnosis and early effective treatment. This preventable mortality and consequent morbidity can be reduced by an adequate cancer control program. Also, a program of palliative treatment of cases not curable will increase the length of life and economic usefulness and will relieve suffering.

6. Summary of Extent and Progress of Cancer Control Programs to Date

The cancer control program of each state in the country was outlined in the April, 1946, issue of the *Journal of the National Cancer Institute*. At that time the Cancer Commission of the California Medical Association and the California Division of the American Cancer Society were engaged in lay and professional education, and there existed one cancer clinic per 287,808 persons. However, there was no mention of several elements essential to a complete cancer control program.

During the past two years through the cooperation of the California Medical Association, the American Cancer Society and the State Department of Public Health further steps have been taken. These have included: Surveys of existing cancer services and facilities in nine counties, carried out in cooperation with county medical societies; extension of the professional education program to the nonmetropolitan areas of the State, through visiting teams of specialists; training of physicians in the new cytologic technique for the detection of early cancer and the establishment of a training center in the technique at the University of California; conduct of cancer institutes for nurses; increase in the number of tumor boards to 60—largely concentrated in the metropolitan areas —(of which 22 have been approved by the Cancer Commission of the California Medical Association and 29 are receiving financial assistsance from the California Division American Cancer Society); operation on

an experimental basis of three "cancer detection centers"—in addition to a nonallied one operated by the Los Angeles County Cancer Prevention Society; initiation of a Tumor Record Registry with participation of 20 hospitals; and intensification of lay educational activities.

During the past year the California Division of the American Cancer Society has expended on this program $585,657.71, the State Department of Public Health $144,033 (federal funds). In addition California has had available for research on cancer $326,742 from the national office of the American Cancer Society and the Committee on Growth, $194,403.42 from the U.S. Public Health Service,* and $250,000 from the State Legislature (granted over a two-year period to the University of California).

Although a number of important elements of the cancer control program have been initiated, it should be noted that there are some large areas of the State in which the population has not as yet received full benefits of the program.

B. OBJECTIVES TO BE ACHIEVED

The objectives of a cancer program deal with (1) prevention, (2) control and detection, and (3) palliative treatment.

(1) Prevention

The causes of most types of cancer have not been determined, and with our present knowledge there are few logical prevention measures. There are, however, certain types of cancer where a causative relation has been established and where prevention is possible.

In certain industries workers are exposed to carcinogenic agents. The production and refinement of paraffin oils and certain coal tar products and the use of certain analine dyes in industry are definite hazards in the production of cancer.

Prolonged exposure to radioactive materials and radioactive energy in science and industry are similar hazards. Occupational cancer involves a small portion of industry, but the risk is sufficiently great to justify the continued supervision by the State Health Department and the Industrial Accident Commission and the promulgation of suitable protective measures and the instruction of both the workers and management in the dangers involved.

Intraoral cancers have a definite relationship to dental caries, jagged infected teeth and poor dental hygiene. The dental profession is doing splendid work in reducing the incidence of mouth cancer by intensified public health education regarding dental care. This is a valuable preventive measure. The incidence of skin cancer is definitely related to prolonged exposures to wind and intense sunlight, as in the Imperial Valley farm workers. The incidence of cancer also is related to the irritation of pigmented moles, continued unhealed ulcers of the skin, mouth and lips, and to such conditions as nasal, rectal and uterine polyps. Public education in regard to the danger of these conditions and the need for corrective measures will be an effective preventive measure.

* For summary of all U.S. Public Health Service Funds allocated to California for cancer control for the year preceding August 31, 1948, see Supplement "B" ($1,501,286.42). See page 175.

(2) Control and Detection

The cure of most accessible cancer is inversely proportional to the lapse of time between the incidence of cancer and the time when it is effectively treated. In a higher percentage of cancer patients there is an important and unnecessary period of delay before the diagnosis and adequate treatment of the lesion. The elimination of this period of delay is a major objective in the cancer control program.

There are two approaches to this major objective: (1) Periodic health examination in patients over 40 years of age and (2) public health education in cancer concerning the danger signals and the need for immediate examination and treatment.

Since cancer arises from the cells in the patient's body, cancer may develop and grow for a considerable period before it produces any symptoms to indicate its presence. In accessible regions such as the mouth, rectum and uterus these lesions may be seen or felt by the physician long before the patient is aware of them. These symptomless early lesions in accessible regions may be discovered by periodic health examination. Public health-education directed to the necessity of going to the family physician for a regular physical examination will be an effective measure in case finding.

Many large insurance companies provide the cost of annual examination for their policy holders. Industry requires a physical examination before hiring individuals, but usually this examination does not include the search for early cancer. Both industry and labor should be impressed with extending these required physical examinations to cover cancer.

The second and most important approach to case finding in cancer is educating the public to seek immediate examination as soon as they detect symptoms. There is no method of mass survey similar to that used in tuberculosis and diabetes that can be applied to the discovery of early cancer. There is no simple test for cancer. The discovery of cancer and elimination of the delay before effective treatment of early cancer rests with the patient himself and the first physician he consults regarding suspicious symptoms.

To attain this objective of early diagnosis and immediate effective treatment involves the education of the public in the curability of cancer, the danger signals of cancer and the need for immediate examination of the appearance of any of these danger signals. It involves the education of the medical profession to continually be alert to the signs of early cancer, to the critical need of adequate examination and early diagnosis. It involves the need of adequate and accessible clinics for the indigent. To implement this primary objective of immediate diagnosis and effective treatment requires that every person be able to obtain prompt examination for cancer in his private physician's office, and when he is unable to pay for a private physician that he has immediate access for examination to an appropriate institution.

The present primary objective of eliminating delay in the diagnosis and adequate treatment of cancer requires also an adequate and accessible consultation in the management of a cancer patient. The diagnosis of early cancer is often difficult. Since cancer is a multiplicity of diseases that may involve different portions of the body with many manifestations, the indications for treatment may be varied and complex. Every

physician in the management of a cancer patient should have accessible consultation with other physicians and specialists. In the larger cities consultation can be readily obtained with the physician's conferees. In smaller communities and for indigent patients such consultation can be provided by consultative tumor boards in California where the physician may take his patient for group consultation concerning both diagnosis and treatment of the patient. Many of these tumor boards are recently organized and not well developed and are not sufficiently used as yet by the physicians. This consultation service is being further developed by the medical profession in the State so that every physician may have access to adequate group consultation for any cancer patient that presents a diagnostic or treatment problem.

Most of the counties with large populations have adequate facilities and well trained physicians to insure a high quality of medical care. Most of these counties have approved public and private general hospitals. Most of them can care for cancer in its various phases. These hospitals have complete surgical and radiological services. The quality of medical care in the treatment of cancer given by the staff in most of the general hospitals in California is equal to that found anywhere.

Many of the smaller counties in the state have not the proper facilities for the treatment of cancer. This means primarily that certain counties lack either trained surgeons, radiologists and/or pathologists and there are insufficient beds, hospital facilities or nursing service for the care of cancer patients.

In some of the counties the population is too small and too scattered and the location for physicians inadequate to justify the establishment of local cancer facilities. However, the movement of adequately trained specialists into the smaller counties has been accelerated since the World War.

(3) The Palliative Treatment of Cancer

It is estimated by the American Cancer Society that practically one-half of the patients with developing cancer will not be cured with our present information and by our present methods. However, there are large possibilities in palliative treatment with the relief of symptoms and suffering, economic usefulness and prolongation of life.

In the past it has been difficult to give adequate attention to the advanced cancer patient. Hospitalization has been largely on a custodial basis without sufficient emphasis on medical and nursing care. Many of the cases of advanced cancer require medication, blood transfusions, surgical dressings and other measures that are difficult to carry out at home by an untrained member of the family. Thus the palliative care of the incurable cancer patient is one of the greatest needs and a major objective in a cancer control program.

This objective has two divisions: (1) Sufficient hospital beds with adequate care for patients that need hospitalization; (2) an organized program for adequate home care for cancer patients that do not need to be in the hospital. These two problems require careful study and planning. Methods of solution cannot be outlined at this time and will differ in each county. Their solution is a primary objective in the cancer control program.

Most of the general hospitals in California have been taxed to capacity with acute medical and surgical cases. Few, if any, are geared to the adequate care of the chronic disease patient. More attention needs to be given to the care and treatment of the chronic disease patient who becomes indigent because of prolonged illness. Primary considerations are that the incurable cancer patient receive a high type of medical care and that he is not considered a custodial case. It is also important that adequate care be provided for these private and indigent patients in the most economical manner.

A large percentage of advanced cancer patients do not need prolonged hospitalization. Some of these patients can be rehabilitated. A large percentage of advanced cancer patients requires only a short period of hospitalization and then can be equally well cared for at home if they have proper medical supervision and adequate nursing care. An organized program of home care for cancer patients will reduce the number of hospital beds needed, will relieve mental and physical suffering and alleviate the social and psychological problems of the family. Such an organized program of home care can be conducted at a fraction of the expense of keeping these patients in the hospital. Most cancer patients prefer to stay at home.

A study of the problem of palliative care in California is attached as a supplement.

SUPPLEMENT A

Palliative Treatment of Cancer

Certain general considerations concerning the management of advanced cancer cases are pertinent in approaching the problem of their adequate care. There are multiple methods of approach, involving such questions as type and location of institutional facilities, segregation or nonsegregation from other types of chronic disabling disease, and the proper place of domiciliary care under an organized plan for professional supervision. Each of a number of conflicting concepts have advantages and disadvantages and the objective should be the formulation of a program which will achieve maximum benefit for the greatest number of patients. Realism demands that this goal be reached without dissipation of effort by a limited number of highly trained professional consultants or cancer therapists, whose participation is nevertheless essential in certain phases of the program. The economic aspect of the problem may be expressed in terms of reasonable limitation in primary outlay of funds and annual costs compatible with the primary objective—the maximum betterment of the unfortunate patient with incurable cancer.

Approximately 25 percent of all cancer cases are being cured with present methods of treatment. The present status and trend of cancer research offers little prospect of any radical therapeutic changes in the foreseeable future, so that the major portion of the cancer problem will almost certainly continue to be in the palliative management of the incurable patient. The estimated current case load in California is 45,192 while the number of deaths from cancer in the State for 1947 was 14,000. The incidence rate in a geographic area of this size is roughly equivalent to density of population and thus the predicted incidence, case load and

death rate can be estimated for any county or city unit on a population basis.

Cancer is a large group of separate diseases occuring in all portions of the body and its management is much more complex than, for example, that of poliomyelitis or even heart disease. Even in a single organ cancer can behave with remarkable variability from patient to patient. The spread of cancer characterizing the progress of the disease can involve every organ and tissue. It is obvious that a disease of such disparate behavior requires the full range of medical specialization. Thus, facilities for care of incurable cancer must include ready access to consultative services of specialists in all branches of medicine.

Palliative management of cancer is not solely the care of so-called "terminal" cases. Certain patients regarded as hopeless problems by some physicians may be determined eligible for measures which make them once again useful members of society for varying periods of time. Such palliative measures are important both to the individual and the State. The patient may not only enjoy a longer life but frequently is spared from a long and painful period prior to exodus. He may become economically productive and at least the length of institutional or domiciliary care may be greatly shortened. Many cases not suitable for rehabilitative measures are greatly benefited, their course made more tolerable and their nursing care simplified by special measures which may be radiological, surgical, neurosurgical or medica.

It is therefore of importance for the incurable cancer case to have the benefits of examination by a trained physician or in an institution where all possible facilities for special care are available. In some state and municipal units a corollary derived from this has been that some cancer patients require care in a special cancer hospital.

This poses a fundamental question which requires consideration of features more complex than simply getting the patient and the professional staff together under the same roof. Elsewhere are observations stressing the belief that the importance of the cancer hospital as a special institution is properly in the fields of medical education and research and not primarily in the care of patients. In respect to the immediate problem, the question is whether any benefit would accrue to incurable cancer cases by segregating them in one or more institutions in this State. A negative answer is based on the following considerations:

1. It is impossible to attract a competent, well trained staff, either attending or resident, to such an institution without teaching or research facilities.

2. If located at a site remote from a medical center, the professional staff becomes uninspired and the level of care becomes little more than custodial.

3. Only a few such institutions would be possible, probably not more than two, and that portion of the patient-population at any distance from these hospitals would either refuse to divorce themselves by distance from family and friends or suffer loss of morale thereby.

4. The capital outlay is large and far exceeds that required for enlarging present county operated facilities in the State.

5. If located in a metropolitan area, the necessary concentration of patients in a small area is discouraging to patients who are ambulatory

and active. If located in a rural site, with advantages of space, air and convalescent facilities, the caliber of the professional care deteriorates. (Vide 2.)

6. If located in a metropolitan area, the cost per patient day will approximate that of a general county hospital ($15.00) while with a decentralized plan and diversion of suitable patients to convalescent facilities or domiciliary care the cost should be less than half of a general hospital budget.

The proper care of the incurable cancer patient is thus divisible into two separate phases, require dissimilar mechanisms for maximum benefits consistent with economic realism.

A. The patient should first have the benefits of a thorough examination, which, if necessary, should include specialists competent to perform any special surgical, radiological or other measures for maximum palliation. If no definite measures can be employed, the patient no longer requires the facilities of this complete organization but may require adequate nursing care and medical supervision. Some of the patients for whom definite measures are employed may return to an active life, others will be discharged to "convalescent" care. The average stay for patients not suitable for definitive treatment might be seven days, for those in whom specific measures are employed, approximately four weeks.

B. The major portion of the remaining life span of a patient with progressive, incurable cancer, often referred to with malapropism as a "terminal case," need not be spent in the strange confines of a major institution. Excluding those complications requiring hospital care, the best care for such a patient who has a home and someone with a modicum of intelligence to run it, is domiciliary care. If the patient's comfort can be assured by simple measures applicable at home, regular visits by specially trained nurses, and periodic visits to or by a physician, the average citizen is far happier at home than when subjected to hospital life. The complexity of the modern hospital is geared to the management of acute disease; it is economic wastefulness to board incurable patients with lingering illnesses in the marble halls of scientific medicine. The requirement for good domiciliary care is necessary home nursing by professional, specially trained visiting nurses, and the coincident instruction of the lay attendants in simple nursing, including administration of hypodermics, dressings, irrigations and nutrition. Add to this supervision of the patient by a physician at intervals of one week to one month depending on individual requirements, and one will have accomplished ideal management in the happiest possible fashion for at least 75 percent of incurable patients with home and family.

A considerable fraction of patients are lacking either in a suitable home or in the availability of some person or persons to provide full-time care. The latter deficiency may be due to temperamental unsuitability of relatives for any sort of nursing duties. The majority of patients with no opportunity for domiciliary care are in the indigent group and require institutional care by some mechanism entirely or partially tax supported. For the reasons set forth above, full scale completely equipped hospital facilities are not necessary for this purpose. Segregation of these patients in special wards in a large hospital or in any metropolitan site results in a charnel house atmosphere; active ambulatory patients

with months to live are restricted in small quarters with those who are confined to bed or dying of the disease. The advantages of living space for ambulatory patients, the possibility of segregation of patients according to their degrees of disability or special nursing problems, and a far more pleasant background can be accomplished by locating such institutions in a rural area.

At the same time the care of these patients must not be allowed to sink to a custodial level. For this reason, such institutions, which could be euphemistically referred to as "convalescent" facilities, should be in departments of county hospitals, and in geographic proximity to the parent institution. Members of the staff of the cancer clinic of the county hospital should rotate on service at these units and make regular visits. Resident medical care should be provided by rotating an adequate number of residents and interns through this special service. Patients in whom complications arise which require new measures would thus receive prompt attention. The application of new methods of treatment should be an important activity in these institutions. Consultants in such specialties as neurosurgery, urology and anesthesia should be designated from the staff of the county hospital and from the department of pathology should perform as many autopsies as possible. Autopsy findings correlated with records of original treatment will provide an accumulating wealth of material necessary for new clinical studies of methods and treatment.

Nursing care of patients can be well done with a minimum of graduate nurses as supervisors, supplemented by more readily available nurses' aides. Minor surgical facilities radiographic equipment and routine laboratory tests should be available. Major surgery and radiation therapy would be accomplished more effectively by transfer of such patients to the main county hospital or physician's offices.

The thesis developed herein concerning the care of incurable cancer patients emphasized the necessity of individualization of management. The problem in each patient depends on the nature and predicted progress of his disease, his home facilities and the availability of care at home, his economic situation, and other more imponderable factors. The plan proposed, in outline, may be reduced to the following scheme:

A. Preliminary work-up and management of patients believed to have incurable cancer.

1. If necessary admission to a general hospital, county or private, conducting an approved cancer clinic. With the necessary clinical, radiographic and laboratory data available, the staff of the cancer clinic may:
   (a) Designate patient for medical palliative care only
   (b) Determine definitive surgical, radiological or other measures of treatment to be employed under their direction. A few will be temporarily rehabilitated, the remainder may be eligible for B.

B. Long term palliative care of established cases of incurable cancer.

1. Suitable cases may be returned to their homes for supervised care as indicated herein, and more fully outlined in the "Montefiore Plan," q.v. Subsequent complications or terminal events may require their admission to facilities indicated below.

2. Patients without home or attendants for home nursing admitted to facilities operated by county hospitals, preferably in adjacent rural sites, and staffed by members of the hospital cancer services and by residents and interns from the parent institution, serving on rotation.

The plan is designed to obtain the advantages of maximum palliation for the patient with increased longevity and usefulness compatible with a comfortable life. At the same time it avoids segregation and crowding terminal cancer cases in special centralized cancer hospitals at greatly increased costs without equivalent returns in improved management. The plan would utilize existing county-operated hospital facilities and personnel, amplifying the usefulness and increase the number of approved cancer clinics in California and contribute further to the education of resident and intern staffs of county hospitals in the management of cancer.

SUPPLEMENT B

Funds to California, From U. S. Public Health Service for Cancer Control and Cancer Research

Prior to August 31, 1948

Research Grants: (June 29, 1948)		
University of California		
Greenberg	$16,200	00
Bostick	5,335	00
Shimkin	79,372	50
Kirk	3,240	00
Moon	2,671	92
Eiler	5,724	00
Brooks	13,608	00
College of Medical Evangelists:		
Schindler	$11,910	00
Levine	5,500	00
Stanford University:		
Luck	$17,820	00
Kirkman	5,842	00
Cutting	5,292	00
Mt. Zion (San Francisco):		
Biskind	$8,450	00
University of Southern California:		
Winzler	$5,985	00
Mehl	6,453	00
Fellowships:		
California Institute Technology, Dougherty	$500	00
University of California, Berlin	500	00
Teaching Program:		
College Medical Evangelists (12/11/47)	$25,000	00
University Southern California (3/11/48)	25,000	00
University of California (2/48)	25,000	00
Construction Grants:		
University of California	$1,000,000	00
Los Angeles County Hospital (Cancer unit)	35,255	00
Cancer Teaching Grants via California State Board Health:		
University of California (Traut's cytologic prog)	$43,320	00
California State Board of Health, non-metro. prof. ed.	9,275	00
Cancer Control Program (California State Dept. Health)		
Control program (original grant)	$124,033	00
(Money spent at end of fiscal year—$106,545 00)		
Tumor Registry, special grant	20,000	00

METHODS TO BE USED TO GAIN OBJECTIVES

1. Analysis of the Problem

Statistical services in the field of cancer have numerous uses essential to the achievement of the above objectives. Such services are designed to provide: (1) Knowledge of the extent of the total cancer problem in the population; (2) information for epidemiological investigations of the relationship between the different types of cancer and age, sex, race, marital status, occupation and other factors; (3) a basis for evaluation of progress in control of the disease; (4) a basis for estimating the need for professional and other services and facilities in the care of cancer patients; and (5) material useful for both professional and lay education. In addition, the development of statistical services stimulates the improvement of case records and record systems, and the follow-up of cancer patients.

At the present time statistical services are not adequate for all of the above purposes. Mortality statistics for California have been tabulated systematically since 1906, and they provide the only relatively complete body of statistical knowledge about cancer in the State. Statistics on living cases in California—for example, the total number of cases in the population, the number of new cases occurring each year, the duration and survival of cancer cases—such statistics, though potentially more useful than mortality statistics are available only to a very limited extent. At present they are adequate only to give a partial indication of the total magnitude of the problem. Much more information on cancer morbidity is needed.

In order to obtain adequate morbidity information it is necessary that the original sources of the information be complete and accurate. Requirements for such completeness and accuracy are: (1) Medical records of cancer cases containing full histories and complete notes on diagnosis and treatment; and (2) unit record systems in medical institutions whereby all records for each patient are kept together in one place.

A central tumor registry has been established by the State Department of Public Health with the endorsement of the Cancer Commission of the California Medical Association. The registry represents one method for obtaining cancer morbidity information. It serves to improve cancer records, to assist in follow-up of cases, and to stimulate professional education. The registry is based on voluntary rather than compulsory reporting of cases. Hospitals and clinics participating in the registry receive statistical consultation on their record systems, are assisted in their follow-up work, and receive statistical tabulations of their own cases. The registry has been in operation for only a brief period but has already shown its value not only in terms of laying the groundwork for better morbidity statistics, but also in terms of service to the participating hospitals and clinics.

2. Preparation of Professional Personnel (undergraduate education, post-graduate and in-service training)

1. *Undergraduate Medical Education*—This is being accomplished with increasing effectiveness by the medical schools of California and lies wholly within their sphere. Teaching concerning cancer is most extensive

in the fields of pathology, surgery, gynecology, radiology and internal medicine. Majority opinion favors instruction being given as parts of these fields of medicine as distinct from courses in oncology.

Insofar as medical education conforms with the requirements of the Council on Medical Education, the standards of the Association of American Medical Colleges and the provisions of the law relative to licensure it should not be interfered with. Medical educators are in the best position to judge the merits of methods of instructions. However, under-graduate medical education in cancer is being re-evaluated by the faculties of the medical schools. The National Cancer Research Institute of the United States Public Health Service has made available grants up to $25,000 for approved projects submitted by any medical school for the coordination and intensification of cancer instruction in its various departments. Four medical schools in California have availed themselves of such grants.

The under-graduate instruction in cancer in schools of dentistry and schools of nursing should be carefully studied and organized to give proper emphasis and training in this disease.

2. *Graduate (in-service) Education*—There has been a progressive increase in the average duration of graduate training. This is in part due to the desire of young physicians to qualify for specialty boards and special societies. There has also been a realization that further training falling short of these objectives is of great value.

There is an increasing number of hospitals seeking approval for intern and resident training. In order to qualify, a hospital must meet the requirements of The Council on Medical Education and Hospitals of the A.M.A. or the American College of Surgeons.

Training programs require numerous conferences including tumor clinics, X-ray, pathological and cliniopathological conferences. Large numbers of patients are hospitalized for malignant disease and the intern or resident is given clinical instruction concerning cancer on the wards in the course of diagnosis and treatment of these cases.

The quality of the training offered in hospitals varies and depends largely upon the competence and interest of the attending staff. This applies to the diagnosis and are of all diseases, including cancer. Staff appointments are made in different ways and by different types of governing bodies of the hospitals.

Hospitals should be encouraged to improve the professional competency of their staffs (and this is being done to a considerable extent). The California Medical Association has appointed a committee composed of members of medical school faculties to advise and assist hospitals in attaining positions which will permit approval for graduate training. Hospitals lacking tumor boards or clinics should be encouraged to establish them.

There is continuous improvement in graduate training which will continue at an accelerated rate and legislation toward this end would not be desirable. It would be more apt to be productive of harm than benefit.

3. *Post-Graduate Education*—The medical schools, the medical profession and the American Cancer Society have been active in this field in cooperation with the Department of Public Health. The medical schools provide post-graduate courses some of which include instruction in the diagnosis and treatment of cancer and some of which are devoted wholly to this purpose.

The California Medical Association has an extensive post-graduate program which includes presentations concerning cancer. This carries information to the physician in his home community.

The Cancer Commission has published its studies in *California Medicine*. These are to be gathered together in monograph form and sent to the physicians of the State. The Cancer Commission holds extensive refresher courses at least annually in each of the northern and southern portions of the State. Additional regional conferences are held.

Teams of speakers are sent to the county societies to offer information and instruction concerning cancer. These teams consist of well qualified speakers, some of whom are drawn from other states.

These activities are carried out in conjunction with the California Division of the American Cancer Society and the California Department of Public Health.

The annual meeting of the California Medical Association and its monthly publication devote considerable attention to cancer.

Post-graduate education for physicians can be best provided by the medical schools and the medical profession. These agencies most clearly understand the needs and the methods of meeting them. Significant studies are being made and continuous improvement can be expected.

Legislation toward this end would be undesirable.

Similar post-graduate training should be available to the dental profession and is being developed. Refresher courses in cancer have been given by the Dental School of the University of Southern California and the Dental School of the University of California at San Francisco. These courses have received financial support from the California Division of the American Cancer Society. A program of symposia or conferences on cancer should be made available through the State Dental Association in the nonmetropolitan areas throughout the State.

Education should be planned for *all* professional groups which are concerned with cancer. Not only physicians and dentists but also nurses, social service workers, health educators, medical record librarians require a continuing educational program in their individual fields if they are to assume their proper responsibilities in cancer control. As in the case of physicians and dentists these groups have formed state and local associations which should be given encouragement and assistance in planning and conducting appropriate educational activities.

PROVISION OF PHYSICAL FACILITIES AND MEDICAL AND RELATED SERVICES

(Listing the type, number and distribution of present facilities and services, with an estimate of what further facilities are needed, and a discussion of methods of organizing and financing immediate facilities and services.)

(1) Facilities

The following outline is presented to show some of the factors to be considered in organizing and financing needed facilities, and various methods of organizing and financing such facilities.

I. *Factors to be Considered*

1. Number, size, and type of facilities needed in relation to existing facilities and to the population and geographical area to be served.
2. Location of facilities:
   a. In or near existing related hospital and medical facilities,
   b. In separate and independent locations,
   c. Accessible to population to be served,
   d. Assurance of availability of trained personnel to staff facilities,
   e. In relation to current planning for additional hospital beds and facilities,
   f. If construction, purchase, maintenance and operation are to be financed locally—assurance of the ability of the area to finance the facilities.
3. Standards of construction, maintenance and operation:
   a. Recommended by professional organizations,
   b. Required by law or government agency regulation,
   c. Required by law or regulation as a condition for receiving financial assistance from:
      (1) Government agencies
      (2) Voluntary organizations
4. Ownership and control:
   a. Type of ownership and control may be influenced by need for financial assistance from governmental agency grant programs.
5. Public attitudes:
   a. Public recognition of the need for the facilities is an important factor if financing is to be done by bond issues, direct use of taxes, or by voluntary contributions.

II. *Methods of Organization*

1. Type of ownership and control:
   a. Private and proprietary,
   b. Private and nonprofit,
   c. Government (city, county, district, state, federal).
2. Geographic basis of organization of needed facilities:
   a. Local,
   b. District,
   c. Regional,

d. State-wide,
e. Bi-state, tri-state, etc.,
f. National.

3. Institutional basis of organization:
   a. As an expansion or an addition to an existing institution or facility,
   b. As part of a new or soon to be constructed facility,
   c. Related administratively and operationally to an existing or new facility, but not physically a part of or adjacent to it,
   d. Not related administratively, operationally, or physically to any existing or new facility.

III. *Methods of Financing*

1. Type of funds:
   a. Private funds—for investment purposes,
   b. Private funds—loaned on a noninterest bearing basis,
   c. Private funds—donated for nonprofit uses,
   d. Tax funds—including government bond issues.
2. Geographic source of funds:
   a. Local,
   b. District,
   c. Region,
   d. State,
   e. Bi-state, tri-state, etc.,
   f. National or federal.
3. Methods of financing (related to type and source of funds)
   a. Promotion,
   b. Public campaign,
   c. Legislation.

(2) Professional and Other Services

(Including the maintenance and staffing of facilities for the provision of services)

Although facilities have been separated from services in this discussion, it is obvious that they cannot be considered as separate and distinct problems. The type and organization of facilities cannot be divorced from considerations of the type and distribution of services to be provided; the financing of services is obviously related to the type of ownership and control of facilities, etc. Many of the factors listed in the above outline apply in general to services as well as to facilities.

In the financing of services, as well as the financing of the *maintenance and operation* of facilities, there are additional features not shown in the above outline: i.e., services may be financed in whole or in part;

(a) On a fee for service basis;

(b) On a prepayment or insurance basis (also, on a mutual benefit or cooperative basis);

(c) By tax funds for indigent patients;

(d) By voluntary contributions of funds;

(e) By the providers of service—through the contribution of their services.

DEMONSTRATION PROGRAM

Many and varied techniques of cancer control have been carried out in other states over the past 10 years. Some of these techniques have been effective particularly in the small states, notably in Connecticut. Some of these techniques may be applicable in California, others may not be necessary or practical. The approach will necessarily be different in metropolitan regions and distant rural areas in this large State.

In order to demonstrate the methods and value of cancer control techniques in California, experimental programs are being conducted in various fields. The Chronic Disease Section of the Department of Health has established a program of reporting cancer morbidity and mortality in 20 California hospitals on a pilot basis. This program is developing a method of statistical studies and the reporting of cancer suitable to the needs in California.

The Los Angeles County General Hospital Tumor Board (with membership representing the University of Southern California Medical School and the College of Medical Evangelists) is developing a follow-up program for cancer patients not only for statistical study but to provide medical supervision and palliative care to patients who have had cancer.

With the assistance of the California Division of the American Cancer Society, an experimental program of cancer detection centers has been conducted in four California cities to determine the effectiveness of this method of case finding in cancer.

The Vaginal Smear Laboratory of the University of California extended its services to the physicians in the adjacent areas, this service constituting a demonstration program of the value of the cytological technique in the Bay Area. Continuation of the demonstration phase of this program does not constitute, however, continuation of the service aspect on a free basis.

A promising field for demonstration programs would be the organization of a service of home care for advanced cancer patients similar to the Montefiore Plan.

Such demonstration programs to be conclusive require the approval and support of the medical profession, the hospital and the community. Such programs, set up on an experimental basis are desirable to indicate the methods of cancer control that will be feasible and effective in this State.

STATE AID TO LOCAL AGENCIES

(With discussion of the desirability as to types of programs and administrative measures.)

In the field of cancer control, state aid to local agencies may take several forms. Consultation services exclusive of diagnosis and treatment of diseases in reference to special problems, represent one means of aid. Direct financial assistance should not be given other than for care of indigent patients. For personnel, equipment, and services for indigents is another means. Also, state aid may be provided in the form of assistance and advice in the recruitment and training of personnel for cancer control work in local areas. Furthermore, in those phases of the control program which are specifically benefited by joint activities of local and non-

local agencies (e.g. lay education, statistical research, and administrative research) state aid could assist in making such joint activity possible and effective.

RESEARCH

(Discussion of the feasibility of a research program within the State.)

Further advances in the prevention, treatment, and cure of cancer is dependent almost entirely upon research. Inasmuch as cancer is a phenomenon of abnormal growth, the fundamentals of which deal with the problem of life itself, cancer research necessitates investigation of many detailed problems, not only in clinical medicine but in the basic sciences (chemistry, biology and physics).

The universities, medical schools and research institutes in California associated with clinical facilities form the basic units of cancer research in the State. There is great need for increased expanding support of these institutions.

There is also need for continued support of administrative research in order that more precise information may be obtained concerning methods for providing the necessary services for cancer patients (such as in the field of home nursing, convalescence, and rehabilitation).

Statistical research is being conducted by the California Department of Public Health. This desirable type of research requires the systematic collection of statistics and the evaluation of results from year to year. For example, careful analyzing of cancer mortality statistics will assist in determining the relative importance of cancer in various sites of the body, differences in cancer among sexes, in different races, and different geographic sections of the State. Such statistical research implies search for the most successful techniques for morbidity studies, such as compulsory reporting of cancer, or the use of voluntary tumor registries.

A clinical cancer research program embodies not only an expansion of present basic research, but the training of research fellows and programs of grants-in-aid to the various institutions in the State.

Cancer research, basic and clinical is now being conducted in varying degrees in the universities, the five medical schools, and the California Institute of Technology.

In May, 1947, the State appropriated $250.000 to the Regents of the University of California to be expended during the ensuing two years for the purpose of conducting "additional research on the origin, prevention, and cure of cancer," in the University of California (and its component divisions). During the two years preceding August, 1948, the national office of the American Cancer Society through the Committee on Growth had allocated $326,742 to California institutions for research and fellowships; of this amount the sum of $170,147 has expired and $156,595 is current. The California Division of the American Cancer Society has allocated $181,236.25 and the U. S. Public Health Service through the National Advisory Cancer Council $194,403.42. For total amounts ($1,501,286.42), see page 175.

It is desirable that funds be available not only for continued support of fellowship and grant-in-aid programs to teaching and research institutions in the State but for *expansion of facilities* as needed so that these institutions may be better able to utilize research funds available from other sources, namely:

(a) The American Cancer Society.
(b) U. S. Public Health Service (The National Advisory Cancer Council).

The erection of buildings and the provision of such facilities for cancer research should be on the basis of a specific contract with the institution, and that contract should be terminated when the facility is completed. In this regard state aid may be necessary to provide construction funds.

HEALTH EDUCATION

(Outlining specific plans for reaching the public, affected individuals and their families, professional and other groups, and outlining the various needs, methods and media to be used, including schools and colleges. Discussion of joint plans for voluntary and public agencies.)

Health Education Relative to Cancer

The objectives of health education relative to cancer must be motivated through knowledge rather than through fear. This can only be done by the proper education of the public. The most profitable medium in any educational program is the youth of our Country. Once the adult has reached maturity or middle age, there is little profit in attempting to change his or her mental attitude towards cancer by virtue of an occasional brief public lecture or public demonstration.

A. Objectives:

1. To gradually instill into developing youth factual information about cancer, presented as a problem to be solved but not one to be feared.
2. To inculcate into the present generation their responsibilities relative to voluntary support of a cancer program.
3. To stimulate a genuine interest in their active participation in the solution of the cancer problem, if not now in the future.
4. To train elementary, high school, and college teachers in the best educational techniques for the presentation of the cancer problems to their future students.
5. Careful study of elementary, high school, and college textbook content with a view of coordinating cancer information with courses in hygiene, physiology, biology, sociology and economics.
6. Continue adult lay education as at the present.

B. Application of Program

1. Policy determination of methods at the state level by the Departments of Health, Education, and the California Medical Association.
2. Actuation of the program at the local level by the Departments of Health, Education, the local medical society, and the social agencies.

COORDINATION IN THE PROGRAM

At the present time the cancer control program in California is being conducted through close cooperation between the Department of Public Health, the California Medical Association and the California Division of the American Cancer Society. The faculties of the medical schools in California have also cooperated generously in the field of professional education in cancer.

For the last 15 years the American Cancer Society, formerly the American Society for the Control of Cancer, has been conducting a program of lay education in cancer which has been rapidly expanding during the last three years. The California Division of the Society now has 28 organized branches in the larger counties in California which are information centers for lay education in cancer and for service to cancer patients. During the last three years the California division has contributed largely to professional education of physicians and to grants-in-aid in the medical schools in the State.

The California Medical Association established a Cancer Commission in 1931 which has been developing a program of professional education in cancer except during the war years. Two studies on the diagnosis and treatment of cancer have been prepared and published. Through the cooperation of the medical schools, refresher courses in cancer have been held in Los Angeles and San Francisco. The faculties of the medical schools have also assisted in cancer conferences in other areas throughout the State. During the past three years this program of professional education has been underwritten by grants from the California Division of the American Cancer Society, and during the last year has had generous support from the California Department of Public Health. The California Medical Association and the component county medical societies have cooperated closely with the county branches of the American Cancer Society. The Cancer Commission of the California Medical Association has also stimulated and assisted in the formation of tumor boards for consultation on cancer in many of the hospitals throughout the State. The commission has also cooperated with the Department of Public Health in cancer surveys in several counties.

Since 1929 the staffs of public and private hospitals have been developing cancer clinics for indigent patients as well as initiating group consultation services for the patients of private physicians. In the past two years the California Division of the American Cancer Society has made financial grants to these organizations in private hospitals to assist them in developing their programs.

During the past two years the California Department of Public Health through its Chronic Disease Service has been developing a cancer control program in cooperation with the Cancer Commission of the California Medical Association and the California Division of the American Cancer Society. A central Tumor Registry has been organized in the department for reporting and tabulation of cancer cases in more than 20 pilot hospitals. The registry includes cases extending back over a period of five years and is also set up on a current basis. The mechanism for conducting this registry and statistical studies connected with it have been set up by the Chronic Disease Service. The Association of California Hospitals has cooperated in developing the Central Tumor Registry and in encouraging hospital participation. Mortality statistics in the State are being analyzed.

A cancer survey has been conducted covering counties including a majority of the state's population. The Department of Public Health, through financial grants and the services of its cancer consultant, has taken an important part in the program of professional education.

Thus the program of cancer control that has been set up in California integrates the work of the California Medical Association, the American Cancer Society, the medical schools, hospital clinics and tumor boards and the Department of Public Health. There is no duplication of effort or projects. The future planning for cancer control should be based on the continuation and expansion of the cooperation.

EVALUATION

The cancer mortality rate adjusted for age and sex changes in the population represents the ultimate measurement of a cancer control program. Periodic review of the trends in mortality from cancer of various sites and types would be a useful guide to control efforts.

As morbidity reporting is perfected and preventive services developed the cancer incidence rates will become a criterion of progress and will suggest areas for special attention.

Survival rate is another good criterion of progress.

One valuable measure of success, especially of the educational program, lies in the amount of delay between the patient's recognition of symptoms and his first visit to a physician. The average period between the first consultation and the start of treatment indicates the adequacy of the educational program.

In addition to the above long-term measures of the effectiveness of control efforts, regular program review ought to include such items as the number of hospitals and other agencies participating in the tumor record registry and the number of reports being received, the number of persons reached in educational programs—both lay and professional—the proportion of pathologic confirmations of diagnoses for the various sites of cancer, and the number of tumor boards and cancer clinics in operation, their distribution and the number of patients seen by them.

A sampling method for determining public knowledge and attitudes is desirable in estimating the effectiveness of educational activities.

SUMMARY AND RECOMMENDATIONS

I. Program Content

Cancer research, basic and clinical, is now being conducted in varying degrees in the universities, the five medical schools and California Institute of Technology. Additional physical facilities should be provided in these institutions to make it possible for them to utilize fully potentially available grants for cancer research from the National Cancer Institute of the United States Department of Public Health, the American Cancer Society and other volunteer agencies.

II. Cooperating Agencies

Close cooperation should be intensified among the California Department of Health, the California Medical Association, the California Division of the American Cancer Society, the Association of California Hospitals and the California Dental Associations.

III. Lay Education in Cancer

1. Adult and community education should be continued and further promoted through means of lectures, radio, literature, and exhibits.

2. Information centers of the American Cancer Society should be increased in number and extended to the smallest communities with a

system of volunteer workers. This includes training schools for volunteer workers.

3. Public school curricula should be modified as necessary to include cancer information in courses in biology, zoology, physiology and public health education at both the high school and college levels, with a similar limited program in secondary schools.

4. Home education by public health nurses and visiting nurses should be encouraged within desirable limits. All categories of persons not doctors of medicine, however, should be cognizant of the limits of their fields of activity and should not transgress these limits. Education in this respect is desirable.

IV. Professional Education

1. Medical schools must continue to give proper emphasis on teaching cancer for medical students, interns and residents.

2. Refresher courses in university centers for practicing physicians should continue to receive support and be increased in number as necessary.

3. Conferences and teaching clinics should be available for every county medical society, particularly in rural areas.

4. Professional meetings on cancer should be held periodically in county medical societies and hospital staffs.

5. Similar undergraduate and postgraduate education on cancer should be developed for dentists.

6. It is desirable that there be adequate graduate education in cancer for public health nurses, medical social workers and medical record librarians in their respective fields of activity.

V. Statistical Studies: Central Tumor Registry

1. It is desirable that the central tumor registry be expanded on a voluntary basis to include all hospitals and clinics and such private physicians' offices as considered practical.

VI. Diagnosis and Case Finding

1. A reference panel of physicians is desirable in every county medical society and in each community to whom patients may be referred for diagnosis and/or periodic health examination.

2. Cancer clinics in public hospitals are desirable for the diagnosis and treatment of indigent patients, and their establishment should be encouraged.

3. Cancer clinics for diagnosis and treatment of indigent patients in general hospitals that have an out-patient department are desirable and their establishment should be encouraged.

4. Creation of consultative tumor boards in general hospitals should be continued in order to give group consultations on: (a) suspected cancer patients in the hospital, (b) to private physicians on patients who are suspected of having malignant disease.

5. Development of consultative tumor boards in rural areas where needed can be assisted by utilizing the services of specialists in adjacent counties.

6. The California Society of Pathologists by resolution in December, 1947, have collectively and severally agreed to furnish tissue diagnosis

for all private patients at fees depending upon the patient's financial status. These services of the private pathologists for patients in the lower income groups should be widely publicized and more extensively used..

VII. Prevention of Cancer

1. The industrial hazards of prolonged exposure to carcinogenic chemicals and to radiation in industry should be subject to public health regulations.

2. The prevention of cancer is best effected at this time by lay and professional education.

VIII. Palliative Treatment

1. Chronic disease beds in both private and public hospitals or attached to such hospitals utilizing the visiting and resident staff to insure maximum scientific and humane care should be provided in or by each county.

2. Patients in nursing homes should be under adequate medical supervision.

3. Home care for cancer patients, including the services of private physicians, the staffs of public hospitals, public health nurses and volunteer workers in the county branches of the American Cancer Society (the Montefiore Plan or some modification thereof) should be provided by the counties.

IX. Cancer Detection Centers and Cancer Hospitals

Cancer detection centers for the examination of well persons are not included in this program. The case finding yield of 0.1 to 0.5 percent in such centers is not an efficient public health measure when balanced against the exorbitant expense. It is estimated that there are over 1,900,000 persons in California (1946) between the ages of 45 and 65 years (the so-called cancer age). It is inconceivable that any number of detection centers can make complete physical examinations of the majority of this number of persons even once a year. Experience has shown that the cancer detection center is not a practical method of mass survey comparable to the methods used in tuberculosis, syphilis or diabetes.

This program does not recommend the establishment of independent cancer hospitals in California. The present trend in hospital planning is toward general rather than special hospitals. The majority of cancer patients can be treated as well in properly equipped general hospitals or in the private offices of physicians. This procedure would be little altered by the erection of two or three large, expensive, independent cancer hospitals.

The program of research and training of physicians is well established in our universities, our five medical schools and in the California Institute of Technology. More buildings and facilities may be required to develop the research program in some of these institutions, but the expansion of research and resident training in these existing schools will be more effective than that obtained by building special cancer hospitals. Cancer research is primarily dependent upon the basic sciences and such research, to be productive must necessarily be closely integrated with the institutions in which those disciplines are followed.

ADMINISTRATION, FINANCING AND LEGISLATION

I. Administration

The administration of the official projects for the control of cancer as now set up in the Chronic Disease Service of the California Department of Public Health is adequate and satisfactory and should be continued. Additional personnel or space for the central tumor registry may be necessary. No independent division of cancer control in the Department of Public Health is recommended.

II. Funds

At present the Chronic Disease Service is receiving and spending federal funds for their cancer control program. The continuation of such federal grants may be contingent upon the State of California sharing this expenditure. State funds should be appropriated to supplement federal grants necessary to conduct the projects of the Chronic Disease Service and replace federal grants if these are reduced or withheld. State funds for the program of cancer control should be appropriated to the California Department of Health and administered by the Chronic Disease Service of that department. State funds should not be used by the Department of Health for the diagnosis and treatment of cancer. The functions of a public health department do not encompass the practice of medicine.

III. Lay Education

The program of lay education in cancer in California is being well conducted and properly expanded by the American Cancer Society and its California Division. The financing of this program is made possible by public contributions during the April Campaign of the American Cancer Society, and by additional private contributions. The administration of this program should continue in the California Division of the American Cancer Society.

Health education in public schools and state colleges is now conducted as a joint program of the Department of Education and the California Department of Public Health. State funds appropriated to the Department of Public Health should be used in the cancer program in cooperation with the Department of Education and with the California Division of the American Cancer Society.

IV. Professional Education

Under-graduate education in medical schools is now being assisted by federal funds administered by the National Cancer Institute of the United States Public Health Service. At the graduate level residencies and fellowships in cancer are being financed by the National Cancer Institute and the American Cancer Society.

Professional education in cancer for the practicing physician is being developed as a joint program of the California Medical Association, the California Division of the American Cancer Society and the California Department of Public Health. This cooperative program should be continued. State funds should be available to the California Department of Public Health and should be used to include the production of educational material such as teaching films and lantern slides as well

as to share the expense of Refresher Courses, meetings, teaching clinics and symposia on cancer for physicians and dentists.

Federal funds administered by the California Department of Public Health are now being used to finance professional education in the cytological diagnosis of cancer at the University of California. State funds should be used to supplement or replace federal funds for such post-graduate courses for practicing physicians and/or technicians when requested by the medical schools.

State funds administered by the Chronic Disease Service should also be available for post-graduate education in cancer as it pertains to their specific duties and activities for public health nurses, medical social workers and record librarians. This type of professional education should be conducted in cooperation with the Cancer Commission and state organizations of these various groups.

V. Statistical Research

Statistical research in cancer morbidity and mortality should be conducted on a continuing basis in California. Data for such research should be collected from all available sources. The tumor registry program, which is providing basic morbidity data, should be expanded to include voluntary reporting of cancer cases from hospitals, clinics, and as many physicians as may be deemed practical by the Cancer Commission of the California Medical Association. Funds should be made available to compensate these reporting sources, at least in part, for expenses incurred in such reporting.

Cancer statistical services should be conducted by the California Department of Public Health and state funds should be used to support the cancer statistical services, including the tumor registry program.

It is emphasized that the reporting of cancer cases to the California Department of Public Health shall be on a voluntary basis.

VI. Curative and Palliative Treatment

The medical care of the indigent is the responsibility of the county government. Cancer, however important, is only one phase of the problem of medical care, so that the curative and palliative treatment of indigent cancer patients should be administered by county authorities and financed from county tax funds. It is again recommended that state funds be not used for the diagnosis and treatment of cancer.

VII. Research

Grants-in-aid for cancer research are available to teaching institutions in California from the National Cancer Institute and from the American Cancer Society. These grants are largely dependent upon the facilities and personnel in any institution available for the conduct of such research. Lack of adequate housing and physical facilities in our teaching institutions may restrict the availability of such grants. A survey should be made of such facilities for cancer research in each of the existing teaching institutions, the five medical schools and the California Institute of Technology to determine their need. The erection of buildings and the provisions of such facilities for cancer research should be on the basis of a specific contract with the institution, and that contract

should be terminated when the facility is completed. In this regard state aid may be necessary to provide construction funds.

GENERAL STATEMENTS

1. A program of cancer control is in the process of development in the State of California under the auspices of the Cancer Commission of the California Medical Association and the California Division of the American Cancer Society, in cooperation with the California State Department of Health.

2. The educational program of the Cancer Control Project will cause progressively future expansion and development of the over-all program.

3. State funds should not be used in diagnosis and treatment of cancer except in instances of county indigent patients whose residence is not clarified to the extent that county responsibility is established.

4. State funds may be legitimately used to provide adequate housing for physical facilities in our teaching institutions in order to expand and promote cancer research in the State of California.

SUMMARY

No legislation is needed to develop the various projects of the Cancer Control Program except for its educational, research and statistical aspects.

APPENDIX D-2

THE HEART DISEASE PROBLEM IN CALIFORNIA AND RECOMMENDATIONS FOR A HEART DISEASE CONTROL PROGRAM

A Report Prepared by The Heart Advisory Committee
California Tuberculosis and Health Association

A. GENERAL STATEMENT

Paul D. White, one of America's outstanding cardiologists, has stated,* that "cardiovascular disease constitutes the major public health problem of our day."

Mortality

As a cause of death, heart disease ranks first by a wide margin. In California during 1947, heart disease accounted (Table 1) for 32,535 deaths—one-third of all deaths which occurred during that year. If the closely related vascular diseases are added, the combined total amounts to almost half of all the deaths which occurred in California during 1947. Although mortality from heart disease increases with age, it is by no means limited to persons in the older age groups. In 1947 five percent of those dying of heart disease in California were under 45, and 31 percent were between 45 and 64. Table 1 shows the number of deaths in California in 1947 attributed to the major groups of cardiovascular-renal diseases.

Analysis of the trend of mortality from heart disease over a period of years is complicated by the changes that have occurred in diagnostic concepts of the medical profession, and in statistical assignment of the primary cause of death. Because of these changes, there has been a shifting of terms within the total group of cardiovascular-renal diseases. Part of the deaths which in 1910 or 1920 would have been attributed to intracranial lesions of vascular origin (cerebral hemorrhage and apoplexy) or to nephritis, are today assigned to heart disease or to other diseases of the circulatory system. For this reason the mortality trend of the cardiovascular-renal diseases should be considered as a whole. The trend in California is shown in Table 2.

It will be noted that between 1910 and 1947 the number of deaths from cardiovascular-renal diseases increased from under 10,000 to almost 50,000. Most of this rise, however, is attributable to increase in population and to aging of the population (the age-adjusted death rate remains relatively stationary). The age-specific death rates (Table 2) show that for persons under 45 years of age the death rate from cardiovascular-renal diseases has been decreasing. It is in this age group that the effects of infectious processes on the heart and kidneys are most commonly found. For persons between 45 and 74 the death rate from cardiovascular diseases has remained relatively constant; the death rate among persons in the productive years of life continues at a high level. For those 75 and older it has actually been increasing. In this advanced age group the arteriosclerotic and other cardiovascular-renal diseases are prominent.

* Chapter on Heart Disease, Preventive Medicine in Modern Practice, *New York Academy of Medicine*, 1942, page 427.

Morbidity

Mortality data do not by themselves give a full picture of the magnitude of the heart disease problem. Comprehensive morbidity information is needed, but is not available. An indication of the extent of heart disease disability in one segment of the California population may be obtained from the reports of the California Disability Insurance Program. Under this program in 1947 approximately 3,000,000 persons (for the most part industrial employees) were eligible to receive cash benefits of $10-$20 per week for wage loss due to disabilities, starting after a one-week waiting period. Benefits were not paid beyond a maximum of 23.4 weeks. It should be noted that this program does not cover housewives, farmers, business or professional persons. Employees are covered by either the state plan or voluntary plans and benefits vary with the different types of plans.

Under the state plan in 1947 benefits were paid for a total of 89,160 spells of disability. Of these 12,858 spells were due to the cardiovascular diseases, with benefits amounting to $2,835,058 for 148,671 weeks of disability. Among those covered by voluntary plans for the same year benefits were paid for a total of 35,998 spells of disability. Of these, 3,155 spells were due to the cardiovascular diseases, with benefits amounting to $582,819 for 21,716 weeks of disability. These statistics pertain only to those in the working force at the time of becoming ill. They do not include persons with heart disease who are chronic invalids and outside the working force. Many persons with heart disease symptoms do not lose time from work, but continue until they die suddenly; this is especially true of coronary artery disease.

Nature of Heart Disease

It should be noted that the terms heart disease and cardiovascular disease actually cover a multiplicity of diseases with varied causes. A small proportion of heart disease is congenital; some of these cases are now considered to be due to virus infections during pregnancy. A substantial amount of heart disease arises from infectious processes, such as diphtheria and especially rheumatic fever in childhood, and syphilis which usually occur during early adult life. High blood pressure and arteriosclerosis are the principal causes of cardiovascular disease in later life. Certainly a great deal of work remains to be done in determining the causes of cardiovascular disease in later life. Even now we know that the incidence of heart disease is much higher when diabetes or obesity is present.

Though we do not understand the precise cause of all forms of heart disease, we do have sufficient information upon which to base action for the reduction of deaths and disability from heart disease. Medical science has recently produced numerous techniques which can be utilized in the attack on heart disease. Among these should be mentioned the use of drugs in preventing and treating infectious processes, surgical treatment for certain forms of congenital heart disease and of high blood pressure, and the improved methods of treatment for the heart diseases of adult life. A generation ago the treatment of heart disease consisted largely of rest and medicine; today clinicians use a program of total management of the cardiac patient. The latter implies a broader approach involving a variety of medical and nonmedical measures. Emphasis is shifting from the

handling of advanced heart failure toward early detection and continuous supervision in order to achieve a maximum working life, enjoyed in comfort.

As public responsibility for disabled persons increases, the maintenance of productivity becomes a matter of great social concern. Nowhere is this principle of minimizing the effects of ill health more significant or the ultimate benefits more promising than in the case of heart disease.

B. OBJECTIVES OF A HEART DISEASE CONTROL PROGRAM

Heart disease control encompasses four principal aims: Prevention of the disease or the arrest of its progress; early diagnosis and adequate medical treatment; rehabilitation of the patient; and alleviation of distress among advanced chronic invalids. Although these goals are closely interrelated a brief discussion of each is given below.

Prevention

When applied to heart disease the term prevention refers not only to specific measures such as diphtheria immunization, but also to action taken for the control of certain diseases, e.g., rheumatic fever. This represents a broadening of the concept of preventive medicine to include the prevention of the progress of disease. The prevention or reduction of obesity also tends to reduce deaths and disability from heart disease.

Diagnosis and Treatment

A comprehensive heart disease control program should include provision of early diagnosis and adequate treatment. These are, of course, primarily the responsibility of the medical profession.

Rehabilitation

In times past, rehabilitation has been regarded as aimed at individuals with obvious physical impairment. Today activities are being expanded to serve those with just as serious but not so obvious defects, such as heart disease. Rehabilitation of the patient with cardiac disability ideally should start with the early discovery of the disease. In far too many cases, patients seek medical attention only when long-standing symptoms indicate that advanced physical changes have occurred. For best results patients must be directed into the hands of the medical profession early in the course of the disease. Hence, early case-finding is an important element of the program. Rehabilitation has been defined as the restoration of the handicapped to the fullest physical, mental, social, vocational and economic usefulness of which they are capable. In the case of the cardiac patients, the services properly include not only physical restoration, vocational training and placement, but also continued medical supervision in the guidance of the rehabilitation effort and the observation of its effects.

Alleviation

Attention must also be devoted to the alleviation of discomfort among those for whom neither prevention nor rehabilitation is possible. This is the fourth objective of a comprehensive heart disease control program. The care of long-term cardiac illnesses in hospitals, in other institutions,

and at home is an increasing responsibility. It will require the coordination of effort from many sources—the medical profession; hospitals, nursing homes and custodial facilities; and the various home-care services such as bedside nursing, medical social service, and housekeeping. Plans for long-term heart disease should be closely integrated with those for long-term illness in general.

C. METHODS

Rheumatic Fever Program

Rheumatic fever control activities have been carried out in several California counties during the past several years. A special report on this subject is now being prepared for presentation to the State Legislature.

Statistical Evaluation—One of the primary elements in the attack on heart disease is the statistical study of morbidity as well as mortality from the various forms of the disease. Mortality data is available in federal, state and local publications. Morbidity information, however, is not so available. Except for rheumatic fever, heart disease is not reportable; hence, data concerning incidence and prevalence including their relationship to age, sex, race, occupational status and other factors can be obtained only indirectly. In developing a heart disease control program, a system for obtaining current general morbidity information would be extremely valuable.

Professional Education—In view of the advances being made in the diagnostic and therapeutic aspects of heart disease, continuous dissemination of new information to the medical profession must be provided. In addition to utilization of county medical society meetings and hospital staff meetings, special conferences on heart disease problems are desirable. Those sponsored by the heart committees of Los Angeles and San Francisco in recent years have proved popular and valuable. It is important that similar opportunities be made readily available to the physicians in rural areas who find it difficult to leave their practices to attend courses in the metropolitan centers. Educational activities for public health nurses, medical social workers and other professional groups are needed to encourage appreciation of their responsibilities in the care of patients with heart disease.

Public Health Education—Progress against heart disease also requires general public understanding of its significance as a health problem, and of the value of early diagnosis and adequate therapy. The importance of regular physical examinations throughout life for the prompt detection of heart disease and other defects must be continually stressed. The all too common attitude of doom with respect to heart disease should be dispelled. Emphasis is needed on the fact that, provided reasonable care is taken, many persons with damaged hearts live their expected number of years as useful members of society. Popular understanding is essential not only for individual health protection but also for the development of community heart disease control activities.

Research—To assure continued advances in our knowledge of heart disease, adequate provision must be made for basic research in the laboratory and in the clinic. The funds available for heart disease research have been trivial considering the magnitude of the problem. Almost entirely neglected has been administrative research, i.e., studies leading to improvement in the application of tools now at hand (such as the miniature-film as a technique for detection).

Demonstration Services—Inasmuch as organized efforts for heart disease control (other than rheumatic fever) are still in the formative period, emphasis will have to be placed on demonstration services.

Screening Methods—One important field needing development is that of screening techniques for the early detection of heart disease, comparable to similar endeavors in tuberculosis, syphilis, and diabetes control. One device (the miniature X-ray film) has already been proved useful. A review of 70,000 miniature-films in Los Angeles revealed that approximately two percent of the general population surveyed had X-ray findings suggestive of heart disease. When thoroughly studied, one-half of this group (1 percent of the total population surveyed) was found to have clinically significant, previously unknown heart disease. This figure means that, starting from the approximately one million miniature-films which will be taken in the California tuberculosis control program during each of the coming years, approximately 10,000 cases of heart disease may be discovered each year. Accomplishment of this goal depends upon: (1) Proper interpretation of the miniature-film heart shadows, and (2) development of a system for follow-up of those with suspected heart disease so as to assure adequate examination. In addition to the miniature-film, several other devices have been proposed for screening the general population for heart disease and these should be adequately tested.

Rehabilitation—Up to the present time in California there has been no organized program for the rehabilitation of cardiac patients. The State Bureau of Vocational Rehabilitation has been able to carry out only limited services for those with heart disease. How to assure proper industrial placement continues as a major unsolved problem in the field of heart disease control. A comprehensive effort in this direction on a pilot basis might well reveal a pattern generally applicable throughout the State. If so, tremendous social and economic savings would result.

Home Care—A demonstration program in the home-care of cardiac patients utilizing the various professional groups as a team, might well point the way to a considerable saving in hospitalization. Such a home-care program for cardiac patients should, of course, be integrated with similar endeavor for long-term illnesses as a whole.

D. SUMMARY AND RECOMMENDATIONS

Two of every six deaths in California are due to heart disease. Another one-sixth are due to other diseases of the blood vessels. A vast amount of morbidity with consequent social and economic loss also results from cardiovascular disease.

Although basic research into the nature of heart disease remains a prime need, organized control activities can be developed with our present knowledge and available techniques. Heart disease control ought to include: (1) statistical evaluation of the problem and of control efforts; (2) professional education, for the auxiliary professions as well as for physicians; (3) general public education; (4) promotion of early case-finding through screening methods; (5) effective rehabilitation services; and (6) adequate services for long-term cardiac patients, including care in the home.

It is recommended that three steps be taken at this time toward the reduction of deaths and disability from heart disease: first, the development of a screening program for early detection with referral of cases to appropriate sources of medical care; second, the establishment of a comprehensive rehabilitation service for cardiac patients including placement in industry; and third, statistical study of cardiac morbidity and mortality. In addition to these specific actions, it is recommended that in the development of a long-range chronic disease program attention be given to home-care services for patients with heart disease, and that the present educational activities pertaining to heart disease be expanded.

TABLE 1

DEATHS FROM CARDIOVASCULAR-RENAL DISEASE OCCURRING IN CALIFORNIA: 1947

Cause of death	*Number of deaths*
Chronic rheumatic heart disease	1,706
Heart disease (except rheumatic)	30,829
Diseases of the coronary arteries and angina pectoris	11,578
Other diseases of the heart	19,251
Diseases of the circulatory system (other than heart disease)	2,880
Arteriosclerosis	2,131
Other diseases of the circulatory system	749
Intracranial lesions of vascular origin	7,652
Nephritis	3,903
Arteriosclerotic kidney	2,912
Other and unspecified nephritis	991
Total	46,970

SOURCE: State of California Department of Public Health, Vital Statistics Records.

TABLE 2

TREND OF MORTALITY FROM CARDIOVASCULAR-RENAL DISEASES DEATHS OCCURRING IN CALIFORNIA: 1910-1940

(Rates Per 100,000 Population)

	Number of deaths	*Percentage of all deaths*	*Crude death rate*	*Age-adjusted death rate* [a]	*Age—Specific death rate*		
					under 45	*45-74*	*75 and over*
1910	9,064	28.0	381.2	523.4	81.0	1010.8	6443.6
1920	14,999	31.8	437.7	549.1	68.2	1008.3	7911.0
1930	25,608	38.6	451.1	542.9	50.7	1041.7	8118.2
1940	37,651	46.9	545.1	545.1	42.5	1101.2	8332.5
1947	46,970	48.4	475.6	[b]			

[a] Adjusted to the age distribution of the California population in 1940. The age-adjusted death rate is the rate that would have applied if the proportion of persons in the various age groups had been the same in 1910, 1920 and 1930 as it was in 1940.

[b] Although it is known that on the average California's population was considerably younger in 1947 than it had been in 1940, sufficiently detailed age data are not available for the computation of 1947 age-adjusted death rates.

SOURCE: State of California Department of Public Health, Vital Statistics Records. United States Public Health Service, National Office of Vital Statistics.

APPENDIX D-3

THE DIABETES PROBLEM IN CALIFORNIA AND RECOMMENDATIONS FOR A DIABETES CONTROL PROGRAM

A Report Prepared by The Chronic Disease Service, California Department of Public Health—In Consultation With Several California Members of the American Diabetes Association

A. STATEMENT OF THE PROBLEM

A generation ago the diagnosis of diabetes was practically a sentence to a lingering death, especially among younger age groups. Today, with proper management of the disease, the patient may look forward to an almost normal life. Yet diabetes was responsible for 2,027 deaths in California during 1947, whereas in 1910 it accounted for only 378 deaths. This increased mortality from diabetes is due in part to the aging of the population (since the disease is more common in the older age groups) and to the increase in the population.

Deaths from diabetes, however, do not fully indicate the magnitude of the problem; attention must also be given to the prevalence of the disease among the living. In a community-wide survey in Oxford, Massachusetts,[1] over two-thirds of the population were tested for diabetes. Results indicated that 1.7 percent of the entire population had the disease. Of the 70 cases in the community, 40 were known prior to the survey and 30 were newly discovered as a result of it. By applying these ratios to California, it can be estimated [2] that there are approximately 170,000 persons afflicted with the disease in the State, with probably 70,000 of them unaware of it.

That diabetes oftentimes causes extended periods of disability is revealed by data from the 1947 operations of the California Disability Insurance Program. During that year diabetes accounted for 540 periods of disability (a total of 5,833 weeks of benefits paid) among employees covered by the state plan, and 106 periods (a total of 585 weeks of benefits paid) among those covered by the voluntary plans.

Although the exact nature and cause of diabetes have yet to be discovered, medical science has produced a specific and effective method of treatment as well as some knowledge of how to prevent the disease. Diabetes is characterized by inability of the body to utilize properly the sugar absorbed into the blood stream from digested food. This failure is associated with a deficiency of insulin, a secretion of one of the internal organs of the body—the pancreas. It is also associated with an increase in the blood sugar level and the "spilling" of sugar from the blood stream into the urine.

Diabetes cannot be cured. However, with diagnosis early in the course of the disease and proper dietary and insulin treatment the individual with the disease may expect practically the same working efficiency and

[1] Wilkerson, Hugh L. C., and Krall, Leo R., Diabetes in a New England Town. *J. A. M. A.*, September 27, 1947, Vol. 135, pp. 209-216.

[2] Using the California Department of Public Health's estimate of the 1947 population, i.e., 9,876,000.

duration of life as those who do not have the disease. Diabetes is more common among obese persons; in fact, incipient forms of the disease may sometimes be arrested through reduction in weight. Diabetes is also familial, with incidence among relatives of diabetics considerably higher than in the general population.

Mortality and disability from diabetes could be substantially reduced if all the knowledge about it were systematically applied. Lack of general public information concerning symptoms and failure to obtain periodic urine examinations results in many unnecessary complications and premature deaths from diabetes. The medical profession, though increasingly aware of the disease, could contribute still further to its early detection by systematic search for it—especially among certain classes of patients such as the obese, the elderly, and the relatives of known diabetics. Once the disease is diagnosed, proper management involves continuing medical supervision including careful dietary instruction. Diabetics must be prepared psychologically if such management is to be successful.

Another important step which should be taken to reduce deaths and disability from diabetes is to educate the public against the dangers of entrusting the care of diabetics to irregular practitioners and cultists. Needless deaths and disability result from harmful remedies recommended by quacks.

An organized community diabetes control program would supplement the services performed by individual private practitioners principally through increasing public consciousness of the disease and its symptoms and through promoting early detection. Such a program would lead ultimately to a reduction in the diabetes toll and its personal and social costs. At present no complete diabetes control program exists in California. It might be mentioned, however, that in one community (San Jose) the County Medical Society and the City Health Department jointly carried out the survey in 1948 among approximately 1,000 industrial employees with the result that several cases of the disease were discovered.

B. OBJECTIVES OF A DIABETES CONTROL PROGRAM

Objectives of a diabetes control program include: (1) Prevention of the disease, (2) early detection and adequate treatment of the disease, and (3) palliative treatment of those suffering from complications such as disorders of the eye and circulatory systems.

The reduction of obesity, particularly among relatives of known diabetics, would result in substantial prevention of the disease in its clinical form. A considerable amount of nutrition education has heretofore been concerned primarily with vitamins and the other so-called protective foods. Some of the life insurance companies have inaugurated broader educational programs, emphasizing the importance of normal weight. Nutrition programs of public agencies should also be concerned with the elimination of obesity and the maintenance of normal weight.

Early detection of diabetes would be favored by wide public knowledge of the symptoms of the disease, by increasing the alertness of the medical profession to diabetes, and by instituting screening surveys of selected population groups or even of entire communities. Once the disease is diagnosed the patient should have continuing medical supervision.

Summer camps for diabetic children have proved their value not only in providing recreation, but also in teaching diabetic children the proper steps in the care of their disease. The further development of such summer camps merits wide support and encouragement.

Provision should be made for the palliative treatment of those suffering from the effects of the disease—not only in hospitals and other institutions but also in their homes. Elderly patients often need assistance in caring for the debilitating effects of diabetes.

C. METHODS OF CONTROL

In attacking the problem of diabetes one of the first steps should be to carry out statistical studies of the morbidity as well as of the mortality from the disease. Inasmuch as diabetes is not a reportable disease, data concerning its incidence and prevalence can be obtained only indirectly. A current general morbidity information system (including data on diabetes) would be of great assistance in planning a program for its control. Analysis of hospital records is another possible source of information. Attention should likewise be given to the possibility of establishing community-wide diabetes registers similar to those established for cancer and other chronic diseases.

Since progress in the scientific understanding of the disease has been so rapid (and advances are still being made) continuous professional education is required for prompt diffusion of the new knowledge concerning diagnosis and treatment of diabetes. It is particularly important that physicians who practice in rural areas and who have been away from medical centers for some time be given the opportunity for contact with colleagues from the metropolitan institutions. In county medical society meetings, hospital staff meetings, and clinical conferences adequate attention should be paid to the problems of diabetes. Physicians with special interest and experience in the disease have an obligation to stimulate such attention. Other professional groups—particularly public health nurses and nutritionists—need continuing educational programs indicating their opportunities and responsibilities in diabetes control.

A program of health education, incorporating a well planned psychological approach, should bring the facts concerning diabetes before the general public and should motivate proper action when the disease is suspected or known.

Probably the most direct approach to diabetes control at present is the screening survey. Simple tests performed on small specimens of blood and urine now permit detection of signs which may mean diabetes. These tests can be applied inexpensively to large groups of people. Those for whom the results are suspicious must be given further study in order to determine whether or not diabetes is present. In this manner, many persons who are unaware of the presence of this serious disease would be referred to their physicians for care which would prolong their lives and prevent disabilities. Organization of such screening programs should be carried out cooperatively by health departments and medical societies.

Research into the fundamental aspects of diabetes should be intensified. Our techniques of control, while vastly improved over those of

25 years ago, are still far from perfect. Further investigation might well lead to more satisfactory means of treatment and may even throw light on the prevention of diabetes. Research is also needed into the methods of applying present information.

D. SUMMARY AND RECOMMENDATIONS

Diabetes, as a substantial cause of deaths and disability in California, merits greater attention from the medical profession and health departments. Current knowledge of the disease if fully utilized would result in considerable improvement of health and saving of lives.

It is recommended that a program of diabetes control be developed in California. Such a program should include: Statistical studies, professional education, public education, development of screening surveys and research. Close cooperation between health departments and organized medical bodies would be essential to the success of this program.

APPENDIX D-4

THE EPILEPSY PROBLEM IN CALIFORNIA AND RECOMMENDATIONS FOR AN EPILEPSY CONTROL PROGRAM

A Report Prepared by the Medical Advisory Committee on Epilepsy, California Society for Crippled Children

The scope of the epilepsy problem has been well stated by the authority, Tracy Putnam, "The social and economic problems presented by the convulsive disorders are staggering. It is estimated that over half a million people in this country suffer from seizures—about as many as have active tuberculosis! About 50,000 are in public institutions, the cost of their maintenance approaching $20,000,000. The expense of caring for those at large, many of them unjustly refused employment, probably amounts to over twice as much. These figures, of course, give no more than a hint of the frustration, anguish, economic loss and misery involved. Liberty of action of persons subject to convulsions is limited, often in an arbitrary manner, by the laws of many states."

Estimates of the economic loss represented by the potential earning capacity of epileptics who are potentially capable of being rehabilitated are not available, but undoubtedly run into many millions of dollars per year. We are at present attempting to obtain statistics as to the number of epileptics institutionalized in California and some idea of their cost of maintenance, but this is not as yet available. The situation of the epileptic might be strikingly modified if adequate therapy, which is now medically possible, were made available to the epileptics. As Doctor Putnam has stated, "Perhaps the most eloquent commentary on the subject of employment is the fact that the majority of people under treatment for seizures do find work. A recent survey by Doctors Lennox and Cobb shows that about three quarters of over a thousand patients, taken at random from many communities, were actually employed in a wide range of occupations."

With regard to the employability of such patients in industries, it is of interest that the Association of Casualty and Surety Companies, representing 61 capital stock insurance companies, has stated that the association does not advise against employment of persons suffering from any disability. Furthermore, it has been the general experience that physically handicapped workers are good workers and records indicate that they have fewer accidents than the average employee who has no particular concern about his health. Specifically, many employers of workers being treated for epilepsy have found them particularly appreciative, devoted and capable. Because epilepsy is predominantly a disease of youth, its prevention and cure from an economic standpoint is much more important than such other chronic diseases as cancer, kidney and heart trouble.

"Recommendations" must necessarily be based upon what can be done about the problem and what agencies or groups are best qualified to carry out the desired program.

Consideration as to what can be done about epilepsy falls into two categories, (1) treatment, including rehabilitation of the epileptic and (2) research. A third consideration—prevention—might be mentioned in terms of "breeding it out" by education of prospective marriage partners and parents and sterilization of patients with marked epilepsy susceptibility.

Rational treatment implies diagnostic study of the individuals and correction of all factors influencing the convulsive susceptibility. Greater advances have been made in studying the causes of epilepsy and its treatment in the last ten or fifteen years than in all previous time and intensive studies are continued along these lines. Several excellent anti-convulsive agents are now available and when properly prescribed, singly or in combination, and with adequate regulation of other factors which influence the convulsive susceptibility of the patient, the prospects of modern medical treatment are excellent. In several large series of patients, seizures have been arrested in as high as 80 percent of epileptic patients. Considering the rapid advances in the anti-convulsive therapy, it is not unreasonable to expect that this figure may be exceeded in the near future.

In connection with the treatment of epilepsy it should also be emphasized that the rehabilitation of these patients involves the proper correction of the psychological, social and economic handicaps previously suffered by the epileptic. As already implied, research in the field of the convulsive states is necessarily largely confined to medical studies on the cause and treatment of epilepsy.

"Recommendations" as to the groups and program of action that can most effectively deal with the problem of epilepsy may be summarized as follows:

1. Only physicians who are adequately trained with respect to convulsive disorders can satisfactorily treat or do research in this field;

2. The physician in treating epilepsy and conducting his research will necessarily call upon several other groups and facilities such as hospitals, certain special laboratories (such as electroencephalography, X-ray, etc.), nurses, pharmacists, technicians, social service workers, psychologists, biochemists, physiologists, etc. These auxiliary groups must also be adequately trained to cooperate effectively in the plan of treatment or research outlined by the physician;

3. Adequate training of both the physician (neurologist, neurological surgeon, psychiatrist, roentgenologist, etc.) and the ancillary technical specialists (technicians, psychologists, etc.) can be facilitated and better treatment assured the epileptic by the establishment of special epileptic centers. Considering the complexity of the problem, the large number of specially trained physicians, technicians, etc., required, and the training and service implications of such centers, they must of necessity be located in cities and preferably in medical teaching centers. In this connection a survey of present personnel and facilities should be made and adequate centers established to utilize them more effectively. The proper development of centers, in large part already provided with adequate personnel and facilities, should be encouraged before starting new clinics in areas where personnel and facilities are not available and where adequate follow-up care could not be assured.

4. If specialist physicians of the highest caliber are to be attracted to such centers and if such physicians are to be given the maximum opportunity to treat epilepsy effectively and conduct their research, certain principles with respect to the organization and running of such special centers are essential:

a. A physician with proper training and qualifications should be placed in charge of the clinic and made responsible for its professional management and operation. No outside agency should attempt to manage or control the professional activities of these centers. The appointment of the director of the clinic would be in the hands of the hospital or medical school in which the center was located. As indicated previously, centers should be established in areas where personnel and facilities are wholly or in part already available rather than starting new centers in areas where personnel and facilities are not available. Lay or political influence with respect to appointments or the management should not be permitted if the quality of the clinics is to be assured.

b. Standards for the center must be established by the physicians who are specially trained in this field. No agency or lay group should attempt to establish standards for such centers. The centers should be open for inspection at any time, however, and should encourage a postgraduate training program. Thus, any agency contributing funds for the support of such centers would be free to follow the work of the centers at all times and, if dissatisfied with the work of the clinic, could withdraw their support.

c. Patient referral to the center should be made by the physician or clinic who had taken care of him previously. In case the patient had no doctor or had previously attended no clinic, it would be proper for him or his family to contact the county medical society in their neighborhood and ask for information. The county medical society could then refer the individual to one of the established centers or give the information to the doctor or clinic who had been taking care of the patient and who wanted to refer the patient for special care in this field. Physicians referring patients to an epileptic center should expect a report of the clinic's findings and recommendations for the patient's follow-up care in the same manner as is now a well established practice in clinics for care of the medically indigent. The only exception to this would be in those instances in which the referring physician requested that follow-up care be given by the epileptic center. In all instances, however, definite arrangements for the professional follow-up services should be made as opposed to any loose arrangements in which neither the center nor the local physician accepted responsibility, or some other agency attempted to fill the gap.

d. Financial support from any source for such centers should be confined to:

(1) Underwriting the expenses of transportation to the centers and the expenses of diagnosis and therapeutic work done at the center for patients who are medically indigent. Since

these centers would be established on a clinic basis, their own social service agencies would be passing on the latter point, namely, as to whether or not the individual applying for care fitted into the economic bracket which qualified him as being medically indigent and, therefore, properly entitled to clinic care. In this connection, it should be the social service agency of the clinic to pass on this matter rather than any outside agency. The fees paid by patients referred to the epileptic centers would, of necessity, be determined by the clinic and would vary from clinic to clinic depending upon their overhead and other expenses as well as support from various sources which might help to defray their expenses. Correspondingly, no outside agency should attempt to fix clinic fees. In the case of patients referred to the epileptic centers who (after being interviewed by Social Service) could not qualify for such care because of the fact that they were not medically indigent, they could seek private appointments with the physicians in charge of the clinics (if this was agreeable with the referring physician) or with any other physician whom their local doctor or county medical society might recommend. The professional fee in this instance would be determined by agreements between the physician concerned and the patient. Again, no outside agency should attempt to fix the fees for such care. With respect to the payment of the clinic, laboratory or professional fees by an outside agency, the medical profession is opposed to any organization paying the medical bills of those who are able to pay for themselves on the basis that there is no more reason to pay the medical bills of such individuals than there is reason for an outside agency to pay their grocery or clothing bills. Payment of medical bills other than those for the medically indigent by any organization, whether it be governmentally sponsored or lay (such as the National Foundation for Infantile Paralysis, Inc., or the Red Cross, etc.), is foreign to our American tradition and should not be countenanced in our plans for the epileptic centers.

(2) Underwriting certain expenses of the epileptic center itself such as the purchase of special equipment (electroencephalographic) or paying the salaries of a special administrative assistant who would aid the physician in coordinating the work in the center.

5. Research in the field of the convulsive disorders will, of necessity, be conducted by specialists in this field in teaching centers. The need for adequate facilities, equipment, space and technical assistance should be emphasized. The limitations in these respects which now exist and the need for adequate support should be stressed.

6. Education: This can be considered under two headings:

a. The training of professional and technical specialists which can best be done by a survey of the undergraduate curriculum in the various schools concerned and by the training

afforded on a postgraduate basis in the epileptic centers proposed;

b. Propaganda to the lay public on the subject through papers, magazine articles, pamphlets, lectures, radio broadcasts, etc., to make the public aware of the problem, the availability of help in this field and to insure the support of the public. Such publicity is at present being handled by two national agencies and except to cooperate with these agencies and further their activities, additional special efforts along this line would not seem necessary. The soundest propaganda in the long run will come with the establishment of quality centers that will effectively deal with this problem. Well-controlled patients in the different areas of the State will result in more effective "advertising" or "sales talk" than many articles or broadcasts.

7. Legislation: Funds should be provided to encourage the establishment and to give continued support as may be required for such centers in the manner indicated above. Funds for research should, likewise, be made available. The amounts needed could be estimated only after a survey of the potential centers was made.

APPENDIX D-5

THE DENTAL DISEASE PROBLEM IN CALIFORNIA AND RECOMMENDATIONS FOR A DENTAL DISEASE CONTROL PROGRAM

A Report Prepared by
The Bureau of Dental Health,
California Department of Public Health

Dental disease affects over 90 percent of our population. It affects 50 percent by the age of two, and steadily increases in incidence until it can be said that only rarely in an adult can the results of dental disease *not* be seen. Dental disease may have its foundation even before conception in that improper maternal nutrition may result in malformations and faulty supporting structures.

Age	*Average number of decayed teeth*
2-5	4 deciduous
6-12	6 deciduous, 2 permanent
13-17	4 permanent
18	7 permanent

Dental health and general health are directly related. Diseases of the teeth and supporting structures are not separate or isolated conditions with effects confined only to the oral cavity. Infection of the teeth and adjacent tissues often produces serious systemic damage in other tissues and structures of the body. Dental disease—a chronic condition in itself—is often considered to be a predisposing cause of other chronic illnesses such as cardiovascular diseases, rheumatism and arthritis, gastric disturbances and cancer.

Until recent years advances in dentistry were primarily concerned with restoration of carious teeth, replacement of teeth and elimination of infection. Today there is growing concern with the prevention rather than the repair of dental disease—prevention not only of dental caries (decayed teeth), but of orthodontic defects, of periodontoclasia, and of cancerous conditions originating in the oral cavity. There is growing recognition of the importance of research in all aspects of the problem of dental disease.

The control of dental disease must be based on prevention with emphasis on early examination, diagnosis, treatment and dental health education. It is well recognized that there are not enough dentists at the present time to take care even of the yearly increase in dental caries, leaving aside the accumulated dental needs of the population. There are less than 15 percent more dentists practicing in California today than there were in 1940, but there are over 40 percent more people living in the State and adding to the demand for dental services. Rehabilitation of the mouths of adults who suffer from dental disease involves enormous costs. The Veterans Administration reported that in the Fiscal Year 1947-1948 the cost of dental treatment for approximately 1,000,000 cases of service connected dental disability was $55,765,831—over $55 per case.

The only realistic approach to the problem of dental conditions is to direct major attention to children. All available means at our disposal must be utilized to control or prevent dental caries and their sequelae in children and thus promote good dental health in later life. The use of topical sodium fluoride is now an accepted and recommended procedure. It should be emphasized, however, that it is but an aid and not a cure-all, and that it should be used in conjunction with regular dental care, proper nutrition and good home hygiene.

Dental disease can for the most part be controlled and control must start with the younger age groups. The dental health of our citizens can be improved by:

1. Developing and expanding research programs in prevention of dental diseases, and in methods of providing service for dental conditions.
2. Expanding education to motivate people to take better care of their own dental health and the dental health of their children.
3. Stimulating the expansion of programs in dental care for children utilizing all accepted preventive and control measures.

APPENDIX D-6

RHEUMATISM

A Report * by the Northern California Rheumatism Association

PROBLEM OF RHEUMATIC DISEASES IN UNITED STATES

The most common cause of chronic illness in the United States is the group of rheumatic diseases. Approximately 7,500,000 Americans have arthritis or some other form of rheumatic disease. Nearly twice as many persons suffer from rheumatism as from heart disease; seven times as many have rheumatism as have cancer or tumors; and ten times as many suffer from rheumatism as have either tuberculosis or diabetes. In fact, rheumatism is more common than the total number of cases of tuberculosis, diabetes, cancer, and heart disease combined. It was indicated by the National Health Survey (Revised 1939), that the rheumatic diseases are first in prevalence, second in disability, and fourteenth in mortality in this country.

"Those suffering from rheumatic diseases include every age group from childhood to old age. In the United States, 30,000,000 people, counting the families of arthritics, are acutely concerned with the medical, social, and economic reflections of that problem. The National Health Survey of 1939 revealed that 97,200,000 days of work a year in the United States were lost as a result of rheumatic diseases. During the war years from January 1943 to May 1945, even among the highly selected groups of military personnel, rheumatic diseases accounted for a loss of 275,000 man-days. The hospital care of these patients would seem to have been neglected. While there are more than 100,000 "free" beds available for the care of tuberculosis patients, there are apparently not more than 200 "free" beds in the entire country specifically available for arthritic patients. The estimated yearly cost of medical care alone for the total number of rheumatic disease patients in this country exceeds $100,000,000. Consequently, this group of diseases presents one of our most important social, economic, and medical problems." * * *

"The magnitude of this problem is great as manifested by the incidence of the diseases and by the many related social and economic problems. The rheumatic disease group is one of the oldest, and it is also one of the most neglected fields of medicine. Although there is a great deal that can be done immediately to benefit the patients afflicted, it must be recognized that all the rheumatic diseases with the exception of the specific infectious arthritides are of unknown etiology and pathogenesis and are without specific therapy." * * *

"The American Rheumatism Association recognized the seriousness of this problem and initiated action to correct the situation." The association requested the National Research Council "to undertake a survey designed to serve as a basis for the development of a comprehensive, long-term research program in arthritis and other rheumatic diseases."

* Abstracted from the "Preliminary Report of Committee for Survey of Research on Rheumatic Diseases," *Division of Medical Sciences, National Research Council,* Washington, D. C. (mimeo.), November 12, 1948.

Analysis of the findings of the survey, and consideration of the effective means of coping with the basic problems involved, led to the following recommendations:

"A research and training program should be established. The research program should embrace: (1) Basic research; (2) clinical evaluation; and (3) consideration of the socio-economic aspects of these diseases. Grants-in-aid and fellowships are necessary. Adequate financial support is essential for the recommended program."

APPENDIX E

PERTINENT INVESTIGATIONS CONDUCTED IN CALIFORNIA AND IN OTHER STATES

SUMMARY

Studies in California

Growing interest throughout the State in the problem of chronic illness is shown by four studies made in California since 1945. These include a state-wide survey of chronic and convalescent facilities conducted under the auspices of the Association of California Hospitals; two community-wide studies (Los Angeles and Santa Barbara Counties) that placed strong emphasis on the increasing need for services and facilities for the chronically ill; and a study of the need for chronic and convalescent facilities in San Francisco. Integration of general hospital facilities with facilities for chronically ill patients was stressed in each study.

Official Planning for the Chronically Ill in Other States

Studies of the chronic disease problem have been conducted and chronic disease programs have been developing in many states throughout the country. Planning for the chronically ill has reached a relatively advanced level in Connecticut, Illinois, Indiana, Maryland, Massachusetts, New York and New Jersey.

Studies made during the 1920's and the early 1930's were concerned for the most part with the institutional needs of chronically ill indigents and the conversion of almshouses to nursing homes. More recent studies, and programs which have evolved from these studies, have also been concerned with the institutional needs of chronically ill indigents, but have gone beyond this problem. They have taken up the problems of hospital facilities for the care of the chronically ill, and licensure of institutions (particularly nursing homes). In some instances, consideration has been given to research in chronic illness and to integration of institutional services, rehabilitation services, and home care services. With but few exceptions, studies and programs in other states have concentrated on the needs of chronically ill persons, and not on the prevention of chronic illness.

Local Planning in Other States

Studies of local services and facilities for the chronically ill have been made in many communities in other states. A number of communities have established *Central Services for the Chronically Ill,* with functions including: (1) Provision of information concerning local services and facilities, (2) promotion of community planning for the chronically ill, (3) public education, and (4) sponsorship and support of appropriate legislation.

APPENDIX E-1

STUDIES PERTAINING TO CHRONIC ILLNESS CONDUCTED IN CALIFORNIA

Survey of Chronic and Convalescent Facilities in California, by J. A. Katzive, M.D. (for Council on Professional Practice, Committee on Convalescent and Chronic Care, San Francisco, Association of California Hospitals, 1945-46).

"To ascertain the extent and adequacy of existing facilities, for the care of the convalescent and chronic sick, in the State of California" a study was made by means of a questionnaire sent to voluntary hospitals, comprising the membership of the Association of California Hospitals.

"This study showed an absolute lack of chronic care facilities organized and established for the specific care of the chronic sick. What few facilities do exist are in the nature of nursing or custodial homes providing bed rest and a minimum of nursing service; practically no supervised continuous medical attention is available and in no way resembles the organization and service provided for the acutely ill in a general hospital . . .

"The need for providing additional chronic and convalescent care facilities should be brought to the attention of all those concerned with public health."

A Hospital Plan for Los Angeles County. (Selections from *A Hospital Study* by James A. Hamilton and Associates, Hospital Consultants, 1946-47.)

On the basis of an inventory of existing facilities and services in Los Angeles County, a plan was developed including provisions for additional treatment and rehabilitation facilities, physically integrated with general hospitals. The report stated in part:

"Every evidence would indicate that the problem of the chronically ill will be the greatest health and welfare problem to confront this community in a generation. To avoid the facility requirements of this problem from becoming unmanageable, much effort must be expended in measures of prevention. Medical research, both in basic sciences and clinical research, into the causes, methods of prevention, and methods of treatment, should be actively undertaken. Social and economic research into factors other than physical damage which contribute to invalidism should be developed. Professional education in the field of geriatrics, not only of physicians but of social workers, nurses, dietitians and rehabilitation workers should be provided. Health education, on a mass basis, directed toward nutrition and prompt medical attention should be conducted. Community services on a visiting basis to families caring for invalids in their own homes should be developed through the following specialists: housekeeping aides, nutrition advisors, diet therapists and recreational workers. Such investment at present would avoid much greater expense at a later period."

Report of Citizens' Advisory Committee on Health and Hospital Care to the Santa Barbara County Medical Society. (Report of Citizens' Advisory Committee on Health and Hospital Care to Santa Barbara County Medical Society, Santa Barbara, Edwin C. Welch, Chairman, 1947.)

This report was made by a committee composed of representatives of 56 of the leading groups and organizations in Santa Barbara County.

Recommendations of the committee—pertaining to services and facilities available to chronic patients in their own homes and in nursing homes and custodial facilities—included the following:

1. That clinic facilities be made more accessible;
2. That the county establish a chronic-custodial facility for the elderly chronically ill patients;
3. That medical case work be provided at the chronic-custodial facility;

4. That the Santa Barbara Medical Society make a study of the medical attention and service now being given the custodial-chronic cases. This study should include recommendations from the society as to how inadequacies in that service could be corrected. The study should also cover the matter of a geriatric service to be included on the free staff of the county facility;
5. That the California State Nurses Association consider establishing not only a nurses' registry for graduate nurses, but one that will include practical nurses, nurses' aides and housekeepers.

The committee considered the problem of hospital facilities for chronic cases as part of the overall problem of providing hospital services for all types of patients. To assist in coordinating services and facilities for the community as a whole, recommendations were made for a Hospital Council, a Hospital and Health Advisory Committee, and a Joint Health Council (of public and voluntary health agencies).

A Summary of a Survey of Facilities for the Care of the Convalescent and Chronically Ill as Contrasted with the Need for Such Care in the City and County of San Francisco. (Metz, Marian, from thesis, University of California School of Social Welfare, September 13, 1947.)

This survey—made by a student of the University of California with committees of the Health Council of the San Francisco Community Chest serving in an advisory capacity—concluded, in part, as follows:

"The state and municipal licensing programs have provided a degree of protection for the occupants of the homes so that no evidences of obvious physical abuse or neglect of the types which have been headlined in other states were seen here. The faults in San Francisco's program for the care of the chronic sick and convalescent persons seems to lie in omissions rather than commissions. There are slightly more than one-fourth as many beds available as current standards say are needed, and few, if any of these, provide all of the services needed to fulfill the objectives of these kinds of care. Most of the chronic facilities merely provide a resting place for the patient between the acute hospital and the grave, with no organized effort being made to restore the patients to useful, if limited and temporary, activity."

APPENDIX E-2

OFFICIAL PLANNING FOR THE CHRONICALLY ILL IN OTHER STATES

CONNECTICUT

The State Legislature enacted legislation in 1947 to implement the following program recommended by the "Connecticut Commission on the Care of the Chronically Ill, Aged, and Infirm":

1. A central institute be established for the study and treatment of cancer, arthritis, heart disease, kidney disease, and mild mental deterioration, and $600,000 be appropriated for the purpose;

2. To increase chronic bed facilities in state-aid and municipal hospitals, $200,000 be appropriated for grants to these institutions;

3. Activities in the prevention, control, and clinic subsidization for cancer now being carried on by the State Department of Health, with the cooperation of the Connecticut State Medical Society, and with hospitals, be expanded to include all chronic diseases;

4. The commission to be continued, and $20,000 be appropriated for this purpose.

ILLINOIS

Two official studies were conducted in Illinois.

As a result of the first study (1941-1945) a bill to license private nursing homes was passed and impetus was given to a program of conversion of county almshouses to county homes for the chronically ill. A series of bills passed by the Legislature in 1945: (1) Established the county homes as medical facilities to care for infirm and chronically ill persons, whether destitute or able to pay for maintenance; (2) permitted public homes, meeting the requirements of the Illinois Public Aid Comsion, to admit appropriate Old-Age Assistance and Aid to the Blind recipients without the client losing his relief status; (3) permitted counties not having their own eligible institutions to send appropriate cases for care to neighboring counties having acceptable facilities.

The second study (1945-1947) shifted its emphasis toward the medical aspects of the problem of care of the chronically ill. The major recommendations made as the result of the second study were:

1. A state research institute for the study of chronic disease and geriatrics be established in connection with the University of Illinois Medical College;

2. Through the cooperative efforts of state and local governments and public and private agencies, immediate attention be given to expanding the number of beds available to the chronically ill in (a) wings of general hospitals, (b) converted county homes, (c) infirmaries of nonprofit homes for the aged, and in (d) private nursing homes of high standard;

3. All hospitals and related medical institutions be licensed;

4. To minimize institutionalization and to lower costs, provision be made in every county for visiting nurse and housekeeping services;

5. A program of rehabilitation of the chronically ill be developed including occupational and recreational therapy, vocational retraining, and social services;

6. For referral purposes, every county in the State to have a register of available approved facilities for the chronically ill;

7. Housing authorities give attention to the development of special apartment house facilities that will enable chronically ill persons to remain in the normal community;

8. No person afflicted with chronic disease be denied needed care because of insufficient funds.

Supplementing these recommendations, a committee of the Illinois State Medical Society (consultant to the commission) issued a report giving specifications for medical supervision and care in institutions for the chronically ill. The commission's recommendations, presented to the 1947 Session of the Legislature, were not enacted into law.

INDIANA

In Indiana attention was called by medical and public health leaders to the increasing proportion of the population over forty-five years of age, the fact that 350,000 citizens of the State are sixty years of age or older, and the possibility of extending the productive years of life. In 1945 the State Legislature added a section to the general health law of the State which provided that:

"The State Board of Health shall provide facilities and personnel for research investigation and dissemination of knowledge to the public concerning the health of persons of middle and advanced age and diseases common thereto * * *. The State Board of Health is hereby vested with discretion in providing the means and methods for such research, investigation and dissemination of knowledge, and may make, adopt and promulgate rules and regulations for the purpose of establishing proper facilities and personnel and to carry out the work described in this section."

Subsequently the Division of Adult Hygiene and Geriatrics was established within the State Board of Health.

MARYLAND

Maryland's program for care of the chronically ill has derived primarily from the effort to provide adequate facilities and care for indigent and medically indigent persons. The program has been directed toward the construction of special chronic disease institutions to replace almshouses, and the provision of medical care for the indigent.

In 1943, legislation was enacted providing for the building of three institutions for chronically ill indigent and appropriating $2,500,000 for this purpose. In 1945 a law was enacted to establish the Maryland Medical Care Program. The program provides medical and dental care for the indigent and medically indigent. It is administered by the State Department of Health in cooperation with the State Medical Society and with local advisory committees on medical care. Although the program was not developed specifically for the chronically ill, a very high proportion

of chronic disease cases requiring long-term care (heart disease, hypertension, arthritis, nephritis, etc.) are included. Of the persons receiving care under the program, approximately 50 percent are over the age of 60.

MASSACHUSETTS

Massachusetts was one of the first states in the country to give official recognition to the public health aspects of the problem of cancer and other chronic diseases. Starting with one of the earliest and most comprehensive cancer control programs, Massachusetts has extended its program to include other chronic diseases.

The cancer control program, under the direction of the Division of Cancer and Other Chronic Diseases, includes:

1. The operation of two cancer hospitals for the treatment of patients who can not be accommodated elsewhere, and for the study of the disease;
2. Financial aid to cancer consultation clinics conducted in hospitals throughout the State;
3. Tissue diagnostic services offered free to any physician in the State.

In extending its program to other chronic diseases, Massachusetts has followed a pattern similar to that developed for cancer. The State is now supporting 20 beds at the Massachusetts General Hospital for the study and treatment of arthritis. In 1945, the State Legislature appropriated $200,000 for the formulation of plans for a new chronic disease hospital of 800 beds. Plans are now being made to establish clinics for other chronic diseases like those in operation for cancer.

NEW JERSEY

The State Department of Institutions and Agencies has for many years called attention to the chronic disease problem, and has provided leadership and assistance in developing facilities for the chronically ill. In 1924, permissive legislation was enacted allowing counties to establish welfare houses to supplant almshouses. Three years later, the Nursing Home Act was passed requiring the licensing of nonpublic nursing homes. In the survey of chronic illness conducted in 1931-1932, the Department of Institutions and Agencies collected and published data on the prevalence of chronic disease in the State, and made general recommendations on improving medical services and facilities.

NEW YORK

Official planning for care of the chronically ill in New York State has been carried on by a Legislative Commission created in 1938 and continued through 1947. The scope of the commission's work was very broad, encompassing all problems relative to the formulation of a long-range health program for the State. Chronic disease was selected by the commission as one of the most pressing problems and the one to which the least attention had previously been given. Emphasis in the commission's work in this field was on (a) regionalization of services and facilities; and (b) development of a program that "does not necessarily envisage, and

is not dependent upon, any fundamental change in present methods of payment for medical services."

The commission's recommendations made in 1947 included those listed below.

1. The state should designate an agency for developing, coordinating, administering and carrying out a program of education, research, rehabilitation and improvement of facilities and services for the care of chronic illness. Such a program should be carried out in cooperation with both state and local official and voluntary medical, health and social agencies.

2. For the purpose of planning for care of the chronically ill, as in all medical planning, the state, exclusive of New York City, should be divided into five regions. New York City would comprise a sixth region.

3. Chronic disease hospital centers should be established in each region by the state. They should admit pay and part-pay as well as free patients. Whenever possible, they should be contiguous to a general hospital, near an approved medical school, and staffed and operated by state contract with such hospital and school. They would provide specialized facilities for diagnosis, treatment, teaching and research, and serve as chronic disease consultation and referral centers for physicians, general hospitals, and related institutions in the regions.

4. Hospital care for the chronically ill, other than that provided by the chronic disease hospital centers, should be made widely available in general hospitals throughout the state, preferably in designated wings, wards or floors of general hospitals or in contiguous buildings; and that there should be formal affiliation between such hospitals and the regional chronic disease hospital centers.

5. In the allocation of (state and federal) funds for aiding hospital construction, special consideration should be given to projects for the establishment or expansion of facilities for the care of the chronically ill in general hospitals.

6. Home services for the chronically ill should be expanded. They should include use of both official and voluntary bedside nursing services, and the provision of housekeeping aids.

No legislation was introduced to implement the recommendations of the commission. Upon termination of the commission, further development of the program was transferred to the New York State Joint Hospital Survey and Planning Commission.

APPENDIX E-3

PLANNING FOR THE CHRONICALLY ILL AT THE LOCAL LEVEL IN OTHER STATES

Locality	*Sponsoring agencies*	*Major Types of Recommendations and Programs*
Chicago, Illinois	Central service for the chronically ill of the Chicago Institute of Medicine.	The service was established in 1944, and was the first of its type. Its functions include: (1) Provision of information concerning local services and facilities for care of chronically ill persons; (2) promotion of community planning for the chronically ill; (3) public education; (4) sponsorship and support of appropriate legislation.
Baltimore, Maryland	Council of Social Agencies	On the basis of a study conducted in 1940, recommendations were made that chronic hospital facilities in Baltimore be increased as part of the state-wide program, and that consideration be given to a plan for home services for the chronically ill.
Boston, Massachusetts	Council of Social Agencies	On the basis of a study conducted in 1927 under the guidance of Haven Emerson, M.D., recommendations were made for: (1) Appointment of a standing committee on problems of the chronic sick; (2) expansion of hospital facilities for the chronic sick; (3) expansion of social service in hospitals; (4) extension of the activities of Homes for the Aged to a service for aged persons outside the home.
St. Paul, Minnesota	Research Department Amherst A. Wilder Charity	A booklet prepared in 1945 points to the need in St. Paul for a well rounded program for the chronically ill including institutional facilities, rest homes, foster-homes, out-patient clinics for the aged, recreational activities, occupational therapy, medical and social case work.
St. Louis, Missouri	Health and Hospital Division, Social Planning Council	On the basis of a study conducted in 1946 recommendations were made for: (1) Establishment of a council on chronic illness; (2) expansion of hospital facilities and custodial facilities for the chronically ill, organized in conjunction with general hospital facilities, and including adequate physical and occupational therapy and social service; (3) expansion of services for care of the chronically ill in their own homes including clinic services, visiting nurse services, and housekeeping services.
Essex County, New Jersey	Essex County Service for the Chronically Ill	The service was established in April, 1948, and is composed of representatives of the county medical society and local chapters of voluntary health organizations. The service has undertaken a program that includes: (1) Establishment of a registry of local facilities and services; (2) establishment of an informational and referral service; (3) promotion of public awareness; (4) conduct of a study of pertinent laws and ordinances.

New York City, New York	The Welfare Council of New York City	In 1933 the Welfare Council sponsored an extensive study of chronic illness made by Mary C. Jarrett. The study was influential in the establishment of the Goldwater Memorial Hospital, a municipal hospital for the chronically ill where both medical and administrative research on chronic illness is conducted. The study also influenced the establishment in New York City of a housekeeping service for chronically ill patients in their own homes. The general pattern of this study was later followed in a number of other localities.
Rochester and Monroe Counties, New York	Committee on the Chronically Ill, Council on Postwar Problems	On the basis of review of existing facilities and services, recommendations were made for: (1) Expansion of facilities for chronic patients in the county infirmary; (2) establishment of units in general hospitals for care of chronically ill patients; (3) expansion of infirmary care in private homes for the aged.
Cleveland and Cuyahoga County, Ohio	Coordinating Committee on the Care of the Chronically Ill, and the Benjamin Rose Institute	A report prepared by Mary C. Jarrett in 1944 included recommendations for: (1) Expansion of hospital facilities and custodial facilities for the chronically ill; (2) expansion of services for the chronically ill in their own homes; (3) promotion of both lay and professional education.
Philadelphia, Pennsylvania	Central service for the chronically ill, Health Division of the Health and Welfare Council	The service was established in March, 1947, as the result of surveys previously conducted by the Health Division. The purpose of the service is "to foster effective community services for the care and rehabilitation of the chronically ill."
Pittsburgh and Allegheny County, Pennsylvania	Health Division, Federation of Social Agencies	On the basis of a survey conducted in 1946-1947 by Claude W. Munger, M.D., and Mary C. Jarrett, recommendations were made for: (1) Assumption by the Health Council of the responsibilities of a central service for the chronically ill; (2) expansion of hospital facilities and custodial facilities for the chronically ill; (3) expansion of services for care of the chronically ill in their own homes—particularly visiting nurse service and housekeeping service.
Richmond, Virginia	Committee on Convalescent and Chronic Care, Health Division, Richmond Area Community Council	A report of the committee in May, 1948, included recommendations for development of a program of expansion of facilities—particularly facilities for convalescent-type care.
Dane County (Madison) Wisconsin	The Friendship Fund	On the basis of a survey recommendations were made for the building of a new institution for long-term patients.
Milwaukee, Wisconsin	Committee on the Care of the Chronically Ill, Council of Social Agencies	On the basis of a survey recommendations were made for: (1) Establishment of a central service for the chronically ill; (2) development of a program for expansion of hospital facilities, nursing home facilities and home care services for the chronically ill.

L-8179— 3-49 3M